

1805

THE
O R I G I N
O F
LAWS, ARTS, and SCIENCES,
AND THEIR
P R O G R E S S
A M O N G
The most ANCIENT NATIONS.

V O L U M E III.

From the Establishment of MONARCHY among
the ISRAELITES, to their Return from the
BABYLONISH CAPTIVITY.

E D I N B U R G H:

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THE
O R I G I N

OF THE
LAW, ART, AND SCIENCE

OF THE
S E R I E S



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T A B L E

O F T H E

B O O K S , C H A P T E R S , A R T I C L E S , a n d
P A R A G R A P H S .

P A R T I I I .

From the establishment of monarchy amongst
the Israelites, to their return from the Ba-
bylonish captivity.

I N T R O D U C T I O N I

B O O K I .

Of government

3

CHAP. I. *Of the Assyrians*

5

CHAP. II. *Of the Babylonians*

6

CHAP. III. *Of the Medes*

8

CHAP. IV. *Of the Egyptians*

12

CHAP. V. *Of Greece*

28

a 2

ART.

iv TABLE of the Books, &c.

ART. I. <i>Athens</i>	29
ART. II. <i>Lacedæmon</i>	39
ART. III. <i>Of the Greek colonies</i>	46

B O O K II.

Of arts and manufactures 52

CHAP. I. <i>Of the Assyrians and Babylonians</i>	53
CHAP. II. <i>Of the Egyptians</i>	63
CHAP. III. <i>Of the Greeks</i>	83

B O O K III.

Of sciences 90

CHAP. I. <i>Of medicine</i>	91
CHAP. II. <i>Of astronomy</i>	94
ART. I. <i>Of the Babylonians</i>	95
ART. II. <i>Of the Egyptians</i>	100
ART. III. <i>Of the Greeks</i>	112
ART. IV. <i>Reflections on the astronomy of the Babylonians, Egyptians, and Grecians</i>	119
CHAP. III. <i>Geometry and mechanics</i>	126
ART. I. <i>Of the Babylonians</i>	127
ART. II. <i>Of the Egyptians</i>	130
ART. III. <i>Of the Greeks</i>	134
CHAP. IV. <i>Geography.</i>	135

TABLE of the Books, &c.

B O O K IV.

Of commerce and navigation 144

CHAP. I. *Of the Egyptians* ib.

CHAP. II. *Of the Phœnicians* 148

CHAP. III. *Of the Greeks* 154

B O O K V.

Of the art-military 162

CHAP. I. *Of the Assyrians, Babylonians, Medes, Syrians, Egyptians, &c.* ib.

CHAP. II. *Of the Greeks* 167

ART. I. *Of the military practices common to all the people of Greece* 168

ART. II. *Of the military discipline of the Lacedæmonians* 175

ART. III. *Of the military discipline of the Athenians* 178

B O O K VI.

Of manners and customs 182

CHAP. I. *Of the Asiatics* 183

ART. I. *Of the Assyrians* 184

ART. II. *Of the Babylonians* 186

ART. III. *Of the Medes* 199

CHAP. II. *Of the Egyptians* 205

CHAP.

VI TABLE of the Books, &c.

CHAP. III. <i>Of the Grecians</i>	208
ART. I. <i>Of the Lacedæmonians</i>	209
ART. II. <i>Of the Athenians</i>	223
ART. III. <i>Of the plays or games of the Greeks</i>	234
<i>Recapitulation</i>	246

DISSERTATIONS.

I. <i>On the valuation of the Greek money and measures</i>	250
CHAP. I. <i>Of the Grecian money</i>	ib.
CHAP. II. <i>Of the Grecian measures</i>	255
II. <i>On the astronomical periods of the Chaldeans</i>	259
III. <i>On the antiquities of the Babylonians, Egyptians, and Chinese</i>	268
IV. <i>Upon a passage of Herodotus</i>	288
<i>Extracts from the Chinese historians</i>	300

CORRIGENDA.

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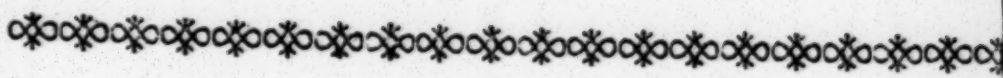
} *Read, See the table, p. 341.*

C H R O N O L O G I C A L T A B L E for the T H I R D P A R T,

Which comprehends from the Establishment of ROYALTY amongst the ISRAELITES to their Return from CAPTIVITY.

E M P I R E S.

[illegible]



YEARS of the world	before J. C.	SACRED HISTORY
2909.	1095.	SAUL.
2934.	1070.	DAVID.
2990.	1012.	SOLOMON.

3405.	599.	<i>Reign and Schism of the ten tribes</i> ZEDEKIAH. . . 11. years.
3416.	588.	Taking of Jerusalem by NEBUCHADNEZZAR. This city and the temple are burnt. The inhabitants of Jerusalem and of almost all Judah are carried cap- tives beyond the Euphrates. Thus ended the kingdom of Judah.
3468.	536.	Cyrus delivers the Jews from captivity. They re- turn into Judea under the conduct of ZEROBABEL, and form, with the permis- sion, and under the protec- tion of the king of Persia, a kind of republic, of which the high priest was the head and chief governor.



The ORIGIN of LAWS, ARTS,
and SCIENCES, and their PRO-
GRESS among the most ANCIENT
NATIONS.

I N T R O D U C T I O N.

THE more we advance towards the times which come near to the birth of Jesus Christ, the more does ancient history unfold itself and become clear. Asia, in the ages on which we are going to enter, presents us with the most striking spectacles. In them we see the fall of the four powerful empires, of the Assyrians, Babylonians, Medes, and Lydians.

Egypt, that monarchy so ancient and so celebrated, begins to stoop to its decline. We shall not here, however, see the ruin of it completed. The point of time in which Egypt, exposed to the ravages of Cambyſes the ſon of Cyrus, beheld the ſubverſion of its throne, and became a province of the Perſian empire, belongs to ages which are not the ſubject of my inquiries. Of this time therefore I am not to ſpeak. I only thought proper to announce it.

Upon the ruins of all theſe different kingdoms aroſe the Perſian monarchy, a nation of which, till this time, there is no notice taken in antiquity. The riſe of this new empire, more extended and more formidable than any of which we have had occaſion to ſpeak, is the term to which we ſhall limit our diſquiſitions.

During theſe ages, there is leſs of grandeur in the images which Europe preſents us. But the abolition of monarchical government in many of the Grecian cities,

then formed into republics, Lycurgus and Solon giving laws, one at Lacedæmon, and the other at Athens, are objects by so much the more interesting, as this epocha is that of the greatness and renown which the Greeks acquired in ancient history.

In the number of famous events belonging to the ages we are going to run over, we ought also to reckon the foundation of Rome, a city which seems to have been destined to swallow up and absorb all the kingdoms of the universe. Her feeble beginnings presaged no such degree of power as she afterwards attained. It was by steady policy and unshaken courage that Rome triumphed over all the obstacles that appeared to oppose her enlargement. This also is an object apart, and which we only indicate. The Romans enter not into the plan which we have laid down.

P A R T III.

From the establishment of monarchy among the Israelites, to their return from the Babylonish captivity, a space of about 560 years.

B O O K I.

Of Government.

I Have reserved, for this third and last part of my work, such reflections, and even such criticisms, as may be made upon the laws and government of the different people who distinguished themselves in ancient times. So that, after having given an account of all that ancient writers have been able to transmit to us in this view, I shall propose some reflections, as well on the particular laws, as on the fundamental principles of all the different forms of government of which I shall have had occasion to speak.

Before I enter upon the subject, it may be useful to speak a little of the state of the Hebrews in the ages we are now surveying. Although I never intended to treat particularly of the history of this people, I think myself obliged to indicate at least the revolution that was then made in the form of their government, and, in few words, to give a general idea of the character of most of their sovereigns.

The Jews, an unsteady and fickle people, were at length weary of having God for their head, and for their immediate monarch. They demanded to be governed external-

ly by a king, and to form a perceptible monarchy the same as other nations^a. It pleased the Supreme Being to consent. It is remarkable, that this innovation happened nearly at the same time that most of the towns of Greece, on motives not very clear to us, erected themselves into republics. Saul was anointed King of Israel the same year that Medon was elected archon of Athens^b.

The Jews had sufficient reason to repent of the novelty they had introduced into the form of their government. The bad conduct of their kings, the revolt of the ten tribes who founded the kingdom of Samaria, and at last the total ruin of the nation, were the just punishments of their inconstancy. If the names of David, of Solomon, of Jehoshaphat, and Hezekiah, are reckoned among those of the greatest kings; it is with horror that we read those of Rehoboam, of Athalia, of Jehoram, and Manasseh. The history of the Jews throughout the whole æra on which we are now employed, is almost one continued scene of horrible spectacles, of bloody tragedies, and the most unheard-of crimes. Impiety and idolatry triumphed at Samaria almost always, often even at Jerusalem. The total ruin of the kingdom of Samaria was the first blow that this people felt. Their iniquities at length drew down upon Jerusalem the vengeance of the Most High. Nebuchadnezzar was the instrument of the Almighty to chastise an intractable nation, relapsing at every moment into the same faults.

It is also proper to observe, that the kingly government of the chosen people began and ended in the space of time now under consideration. The captivity recalled the Hebrews to theocracy. At their return from Babylon, they formed, by the consent and under the protection of the kings of Persia, a sort of republic, of which the high priest was the head and the principal administrator^c.

^a 1 Sam. c. 8. v. 5.

^b Martham. secul 13. p. 326. & 340.

^c See P. Calmet, dissert. sur la police des Hebreux, t. 3. p. 10. &c.

C H A P. I.

Of the Assyrians.

THE Assyrians, of whom we have so long lost sight, are at length about to issue from obscurity; yet after but just appearing they will fall again into oblivion, never more to emerge. This empire is yet more famous by its fall than by its foundation. We are almost as ignorant of the events which occasioned the ruin of this vast monarchy, as we are of those which gave it birth. I shall observe the same method with regard to it as I have followed in the preceding books: I shall relate only what shall have appeared to me the most probable.

The Assyrians, after having held the empire of Asia for many ages, began to lose strength by the revolt of several nations. The Medes, formerly subjected by Ninus^a, were the first to throw off the yoke^c. We find among the ancients so little agreement upon these facts, that I shall say nothing of the circumstances, nor of the particular consequences of that revolution. Two famous empires were formed out of the dismembered parts of the Assyrian monarchy, that of the Babylonians and that of the Medes. Notwithstanding this blow, the throne of Nineveh subsisted still some time with great lustre^f. The names and actions of the monarchs who filled it till its entire destruction, are handed down to posterity. We know of their ravages in Judea. The sacred books are not the only ones that make mention of it. Profane historians inform us, that, even after the revolt of the Medes, the Assyrian monarchs were still very powerful.

Herodotus tells us, that Phraortes, king of the Medes, having declared war against the Assyrians, perished in that

^a Diod. l. 2. p. 114.

Justin. l. 1. c. 3.

^f Herodot. l. 1. n. 102.

^c Herodot. l. 1. n. 95.; Diod. l. 2. p. 137.;

enterprise with the greatest part of his troops^a. The same author, speaking of Sennacherib whom he intitles King of the Arabians and Assyrians, says that he marched to attack Egypt at the head of a formidable army^b. It appears even that Assaradon, the son and successor of Sennacherib, took the advantage of an interregnum of eight years which happened at Babylon, to reunite that kingdom to the throne of Assyria^c. This new empire subsisted thus during 54 years. It sunk at last never more to arise.

Cyaxares, king of the Medes, having drawn into his party Nabopolassar, governor of Babylon, laid siege to Nineveh, took and entirely demolished it^d. The destruction of Nineveh put an end to the kingdom of Assyria. It was for ever destroyed. Even the name of it was lost. From this moment, history makes no more mention of the Assyrians. Their monarchy was divided between the Babylonians and the Medes. This event happened in the year 626 before the Christian æra^e.

C H A P. II.

Of the Babylonians.

THE history of the sovereigns of Babylon is not much better known to us than that of the monarchs of Assyria. The example of the Medes, who shook off the

^a Herod. l. i. 95.

^b L. 2. n. 141.

^c Here is the proof. It is certain, from scripture, that Esarhaddon succeeded Sennacherib his father, King of Assyria. 2 Kings c. 19. v. 37.

Again, we find Assaradin in the canon of Babylon, composed by Ptolomy. We see moreover, that the reign of this Assaradin had been preceded by an anarchy of eight years; from which I am led to suspect that the Assaradin of Ptolomy is the Esarhaddon of the scripture, and that it was by right of conquest that he mounted the throne of Babylon, having without doubt taken advantage of the troubles which an interregnum of eight years had occasioned in that empire.

^d Tobit, c. 14. v. 14. edit. of the LXX.; Nahum, c. 2. v. 8. 10. 13. c. 3. v. 7.; Sophon. c. 2. v. 13. 15.; Ezekiel, c. 31. v. 3. and following; Herod. l. i. n. 106. Strabo, l. 16. p. 1071.; Alex. Poly. hist. apud Syncell. p. 210.

^e See the history of Judith, by F. Montfaucon, p. 245.

yoke of the Assyrians, was followed by many other people dependent upon that crown^m. The Babylonians were not the last to take advantage of the shock which the revolt of the Medes had given to the power of the Assyrians. We see that soon after the time in which we conjecture that revolution to have happened, the Babylonians formed a separate monarchy from that of the Assyrians. The founder of this new race of sovereigns was a prince named Nabonassarⁿ. He it is who occasioned that famous epocha, known in antiquity by the name of the æra of Nabonassar. It answers to the year 747 before Jesus Christ.

From this time Babylon had always its particular kings, independent on those of Assyria. The distinction of the two monarchies is expressly marked in the sacred records. We find a Berodach-Baladan, whom the scripture intitles King of Babylon, sending ambassadors to Hezekiah, in the time of Sennacherib King of Assyria^o. We have already related how Esarhaddon, sovereign of Nineveh, availed himself of an anarchy of eight years into which Babylon had fallen, to repossess himself of the ancient domain of the monarchs of Assyria^p, and how some time after, Nabopolassar, satrapa, or viceroy of Babylon, being in league with the King of the Medes, destroyed Nineveh, and overturned the Assyrian empire^q. After that event, the Babylonians exalted themselves to the highest degree of power. Yet their glory was but transitory. After 88 years of splendor, this empire was destroyed by Cyrus. Babylon was then confounded in the vast Persian monarchy to which Cyrus gave birth.

I have said, and I repeat it, the history of Assyria and of Babylon is known to us scarce at all. Originally distinct, afterwards united, then alternatively separate and reunited, these two empires proceed upon the same line. The same events, the same obscurity, almost every thing

^m Herod. l. i. n. 95.

ⁿ Canon. Ptolem. astron.

^o 2 Kings c. 20. v. 12. ; 2 Chron. c. 32. v. 31.

^p Supra, p. 6.

^q Supra, ibid.

is common to both people. We are ignorant of the greatest part of their laws and of their customs. We want those facts, those details, which alone can serve to characterise a people, and make known their politics, the genius and principles of their government. We must content ourselves therefore with a vague knowledge, too uncertain indeed to gratify our curiosity fully, but which is nevertheless sufficient to give us a very great idea of the empires of Assyria and Babylon.

In effect it is certain, that the Assyrians and the Babylonians founded in Asia two the most extensive monarchies of antiquity. The holy scripture and profane history always speak of them as of two formidable powers. Besides, what we read of the grandeur and opulence of Nineveh and Babylon, is a very solemn evidence of that degree of glory and exaltation to which these two empires had attained. Finally, we see, that, amongst both these people, the arts were flourishing, and the sciences greatly cultivated. All this is enough to assure us that the Babylonians and Assyrians had made a great progress in politics, and in the art of government.

C H A P. III.

Of the Medes.

WE have a pretty just knowledge of the manner in which political government was established among the Medes. These people, after their revolt from the kings of Assyria, did not immediately form a monarchical body. They remained some years in a state of autonomy, as Herodotus calls it^r. Harassed all this time with dissensions and domestic miseries, they were soon obliged to call a general council to deliberate on the means of reducing their state to order, and introducing civil government.

^r See part I. b. I. c. I. art. 3.

^r L. I. n. 96.

They

They could think of no better way than electing a king. The choice fell upon Dejoces, a person greatly distinguished by his prudence, his equity, and the integrity of his manners ^t.

This new sovereign conducted himself so as to justify the choice of the Medes. His first care was to annex to the dignity of king whatever external marks might heighten the lustre of it, and to secure his person from insult and from outrage. He began by commanding that they should build him a house worthy of a sovereign. He himself laid out the ground, and caused it to be lined with good fortifications. He then demanded guards for the safety of his person. The Medes obeyed, the palace was raised upon the spot, and in the manner that Dejoces had ordered, and his guards were chosen by himself ^u.

After having taken all proper measures for the safety of his person, and the maintenance of his dignity, Dejoces next applied himself to the provision of civil policy. Till his accession to the crown, the Medes had lived dispersed in small towns and villages, remote and separate from each other ^x. Dejoces commanded them to build a city which should be large enough to contain a considerable number of families. In order to engage them to this, he made them sensible of the advantage of dwelling in a place fortified and secured from the insults of an enemy. They chose a situation in which art had only to assist nature. The city was soon built. It is that which was known among the ancients by the name of Ecbatana. It was encompassed with seven walls. The innermost inclosed the palace of the king, and there his treasurers were deposited ^y.

As soon as the city was fit to receive inhabitants, Dejoces obliged a part of the Medes to settle in it. He then gave all his attention to draw up laws and to maintain order and civil policy throughout his dominions. As he had to deal with a ferocious people, from whom he had every thing to

^t Ibid. and following.

^u Herod. l. i. n. 93.

^x Ibid. n. 96.

^y Ib. n. 98.

fear, he thought no precaution too much to inspire them with fear and the reverence due to the throne. Persuaded that the more subjects are kept at a distance, the more respect they will pay their sovereigns^z, he raised, so to speak, a wall of separation between him and his people. He ordered, that none should present themselves before the King, without being introduced by officers appointed for that purpose, and no person was allowed to look him in the face. Those even who had the privilege of approaching him, were not to laugh or to spit in his presence^a. All affairs were managed by the interposition of third persons. It was from the centre of his palace that Dejoces saw all that passed in his dominions. Law-suits were discussed before him by writings only; and when he had given judgment, it was also in that manner that he notified it to the parties. Above all, he applied himself steadily to the strict administration of justice. He asserted the authority of the laws by the most severe and most rigorous punishments, judging nothing more essential to the support of an infant state. As soon as he was informed of any injury done, he caused the aggressor to be brought before him, and imposed a penalty proportioned to his fault. For this purpose, he had persons of confidence appointed in all his provinces, who had their eyes upon the great, and made their reports to him when the weaker sort were oppressed^b.

It appears by what we have said, that the government of the Medes was purely monarchical. The conduct of Dejoces gives us the idea of a great politician. I do not know however, that every part of it deserves approbation. We cannot but commend the measures he had taken to give to royalty an exterior appearance capable of striking the imagination, and proper to inspire his new subjects with an idea, that their sovereign was a being different from other men. It was to be feared, that too great familiarity might have

^z *Major e longinquo venit reverentia.* Tacit.

^a Herod. l. i. n. 99. In the Indies it is not permitted to spit in the palace of the king. Voyage of Le Blanc, p. 182.

^b Herod. l. i. n. 100.

drawn



drawn him into contempt, and have given room for plots against an authority yet in its infancy. But can we equally approve the affectation of keeping himself always shut up in his palace, and rendering himself in some sort invisible? a conduct which has been but too much imitated by the eastern monarchs. It was, as is said by a sublime genius of our times, the very worst course these monarchs could have taken. They wanted to procure reverential awe to themselves, but they procured it to the royal dignity, and not to the king. They fixed the attention of their subjects to a certain throne, and not to a certain person. That invisible power which governs, is always the same for the people. Let ten kings be dethroned and murdered, one after another, they are sensible of no difference. It is as if they had been governed successively by spirits ^c.

I know not whether we ought to impute to Dejoces one of the most capital defects which can be objected to the principles of the government established among the Medes. The power of a legislator is imperfect when he has not the power of abrogating a law which he had the power of making. Such, however, were the bounds of the sovereign authority among the Medes. Having once published an edict, it was not in the power of the king to change or to revoke it ^d. I censure equally another custom of these people, that of confiding the education of their monarchs to women only, and to eunuchs ^e; a custom always practised, and still in use in the east.

For two hundred years, the Median throne subsisted with considerable splendor. It then submitted to the fortune of Cyrus, and was absorbed in the vast monarchy of the Persians.

^c Lettres Persanes, let. 100.

^d Dan. c. 6. v. 15.

^e Plato de leg. 1, 3. p. 815.

C H A P. IV.

Of the Egyptians.

FROM the time of Sesostris to that of Bocchoris, that is to say, for near nine hundred years, Egypt furnishes nothing for the present object of our researches. Not that in that time it had suffered any fatal blow or diminution. We see by Homer and by Herodotus, that, in the time of the Trojan war, Egypt was very flourishing ^r. The holy scripture gives us the same idea of it in the time of Solomon and his successors ^s. But we have no particulars remaining, either of the events which happened in Egypt during these nine ages, or of the actions of the monarchs who occupied that throne during this long interval ^h.

The reign of Bocchoris puts an end to this obscurity. This prince has deserved an honourable place in history from the wisdom of his institutions. The Egyptians have put him into the number of their legislators ⁱ. This is making a grand elogium; for in all that long succession of kings which occupied the throne from the deluge to the time that Egypt fell under the dominion of the Persians, there are only five whom the Egyptians have honoured with the title of legislators, Mneves, Saziches, Sesostris, Bocchoris, and Amasis ^k. History has preserved nothing relating to the laws of the two first of these monarchs ^l. As for Sesostris, I have elsewhere given a very circumstantial ac-

^r Odyss. l. 4.; Herod. l. 2. n. 112. &c.

^s 1 Kings c. 9. v. 16.

^h We know only that Shishak pillaged the temple of Jerusalem in the time of Rehoboam.

ⁱ Diod. l. 1. p. 106.

^k Diod. *ibid*.

^l See what we have said of Mneves, part 1. b. 1. art. 4. p. 45. All that we know of Saziches is, that he added some particulars to the established laws, and that he applied himself to the improvement of the worship of the gods. Diod. l. 1. p. 106. We do not so much as know in what age this prince may have lived.

count of the political institutions attributed to this prince ^m. It remains only therefore that I lay before the reader what I have been able to collect upon the laws of which Bocchoris and Amasis are supposed to be the authors. I shall speak also of some other sovereigns whose regulations have reached to us, although these princes have not been put into the number of those whom Egypt specially regarded as her legislators.

Bocchoris, a wise and able prince ⁿ, but of a harsh and severe character ^o, mounted the throne about 762 years before the birth of Jesus Christ. It is he who is said to have regulated the rights of the sovereign, and all that regards the form of contracts and of covenants ^p. To him also are attributed the first laws on commerce ^q. They ordained that whoever should deny that he owed a sum of which the lender could produce no written proof, should be free from the debt upon taking an oath. As for those who lent their money upon security, they were not allowed to make the interest amount higher than the principal.

Till the time of Bocchoris the laws of Egypt empowered a creditor to imprison his debtor ^r. We know that Sesostris, on his accession, paid the debts of a great number of people detained in prison at the suit of their creditors ^s. Bocchoris abrogated that custom. He permitted the creditor to seize only the goods of his debtor for payment, but forbade personal arrests, and actions against the body of the debtor ^t. Solon had this law in view when he established at Athens what was called the *Scisacthia*; a law which took from the creditor the power of compelling payment by seizing the body of the debtor ^u. Diodorus Siciliensis adds, that the other legislators of Greece were blamed, for that having prohibited a man who had lent a sum of money to another, from seizing his arms or his plough, they yet per-

^m See part 2. l. 1. chap. 2. ⁿ Diod. l. 1. p. 75. ^o Plut. t. 2. p. 529. E.
^p Diod. l. 1. p. 106. ^q Diod. l. 1. p. 90. ^r Diod. ibid.
^s Diod. l. 1. p. 63. ^t Diod. ibid. p. 90.
^u Diod. l. 1. p. 90.; Plut. in Solon. p. 86. D.

mitted him to seize the man himself for payment of his debt *.

Bocchoris had so much excelled in that part of government which regards the administration of justice, that many of his ordinances and decisions subsisted and were still observed even when the Romans were masters of Egypt †.

Next to Bocchoris I shall place Asychis, of whom Herodotus gives us a law respecting loans which is singular enough. We have spoke elsewhere of the care which the Egyptians took to embalm their dead, and of their general custom of preserving them in apartments destined to that use ‡. To favour commerce by facilitating credit, Asychis made a law which permitted them to give the bodies of their fathers in pledge for money borrowed *. But by the same law it was provided, that the debtor should be deprived of the honours of sepulture, if he happened to die without having taken up this precious pledge †. We shall be sensible of the efficacy of this punishment, if we call to mind what has been said elsewhere of the light in which the funeral rights were considered by the Egyptians ‡.

Soon after the time of these monarchs, Egypt experienced one of those catastrophes to which all states are exposed. It was invaded by Sabacos, King of Ethiopia, who possessed himself of the kingdom, and reigned fifty years †. This revolution was only transitory. That prince giving up his

* Diod. p. 90.

† Diod. p. 106.

‡ Diod. l. 1. p. 102.; Lucian. de lectu, n. 21. t. 2.; Joan. Damascen. orat. 1. p. 932. de imag. p. 714.

§ Herod. l. 2. n. 136. ¶ Herod. loco citato. * Part 1. b. 1.

† Herod. art. 4. p. 55. n. 137.; Diod. l. 1. p. 75.

If we may believe Julius Africanus, Sabacos succeeded immediately to Bocchoris, whom he took and caused to be burnt alive. *Apud* Syncell. p. 74. Diodorus places the reign of Sabacos a long time after that of Bocchoris, l. 1. p. 75. Herodotus, whose suffrage is of so great weight in all that concerns Egypt, makes no mention at all of Bocchoris, and makes Sabacos reign immediately after Anytis the successor of Asychis, l. 2. n. 137. Some modern chronologists believe, that the Asychis of Herodotus and the Bocchoris of Diodorus are one and the same person under two different denominations. This is one of those critical questions which I shall not undertake to clear, much less to decide.

conquest of his own accord, abdicated the throne, and returned into Ethiopia. Sabacos may with justice be numbered among the legislators of Egypt. Naturally of a mild and humane character, he abolished capital punishments, and ordained that such criminals as were judged worthy of death, should be employed in the public works. He thought that Egypt would draw more profit and advantage from this kind of punishment, which being imposed for life appeared equally adapted to punish crimes and to repress them^e.

Some time after Sabacos, Psammetichus mounted the throne. This prince made a considerable change in the ancient maxims of the government. Till that time other nations were barred access to Egypt^f. At the city of Naukrates only they were allowed to land and trade^g. The Egyptians even, if we believe ancient writers, were accustomed to kill or make slaves of all the strangers they caught upon other parts of their coasts^h. Psammetichus laid down very different maxims. He opened his ports to the commerce of all nations, favoured navigation in his seas, and granted all sorts of privileges to all persons who chose to settle in Egyptⁱ. This prince was fond of the Greeks, and protected them in a particular manner. He owed his preservation and re-establishment to the Ionians and the Carians^k. Not content with recompensing them liberally, he determined to settle them in his dominions; and for their encouragement, he distributed among them considerable heritages of land^l. He even gave them young Egyptian children to be brought up under their tuition, with orders to teach them the Grecian language^m. Psammetichus went still farther; he would have the princes his children educated in the Grecian mannerⁿ, and even allied himself by treaty with the Athenians and other states of Greece^o.

^e Herod. Diod. *locis citat.*

^f Herod. l. 2. n. 151.; Diod. l. 1. p. 78.; Strabo, l. 17. p. 1142.

^g Herod. l. 2. n. 179. ^h Diod. p. 78. & 80. ⁱ Diod. *ibid.*

^k Herod. l. 2. n. 152, 153.; Diod. l. 1. p. 77.

^l Herod. n. 153.; Diod. p. 78. ^m Diod. *ibid.* ⁿ Diod. *ibid.*

^o Herod. l. 2. n. 151.; Diod. l. 1. p. 78.

Amasis, one of the successors of Psammetichus, conducted himself upon the same principles. He conferred many benefits upon the Greeks, and gave them an establishment in the city of Naucrates. Such of them even as came to Egypt only to traffic, were in certain places allowed to erect altars and temples ^p.

By the wisdom of his government, Amasis merited a place in the number of the Egyptian legislators ^q. He is said to have made new regulations for the repartition of the provinces, and even to have given the finishing stroke to the form of the government ^r. Under his reign Egypt was perfectly happy, and was reckoned to contain twenty thousand cities, all very populous ^s. To maintain order among such a prodigious number of inhabitants, Amasis made a law of which we cannot too much admire the wisdom. This law obliged every individual to make a declaration every year before the governor of the province, of his name, his profession, and the means of his subsistence. Whoever failed in the satisfaction of this law, or made a false declaration, whoever could not make it appear that he supported himself by honest means, was punished with death ^t. Herodotus and Diodorus say, that Solon borrowed this law from the Egyptians, and established it at Athens ^u; where, in the time of Herodotus, it still subsisted in all its force. But other authors with more justice, and on better grounds, attribute the establishment of this law to Draco ^x, anterior to Solon by some years. This law was also in use among several other nations ^y.

Amasis ought to be considered as the last sovereign of the ancient Egyptian monarchy. Nay, if we believe Xenophon, he was himself subjected by Cyrus ^z. But it was not till the reign of Psammenitus, his son, that Cambyfes over-

^p Herod. l. 2. n. 178.

^q Diod. l. 1. p. 106. ^r Diod. *ibid.* ^s Herod. l. 2. n. 177.

This fact appears to me much exaggerated. See the memoirs de Trevoux, January 1752, p. 30. & 31.

^t Herod. l. 2. n. 177.; Diod. l. 1. p. 88. ^u *Loco cit.*

^x See Marsh. p. 594. 595.

^y See Perizon. *ad* Ælian. var. hist. l. 4. c. 1. p. 323. ^z Marsh. p. 588.

turned the throne of the kings of Egypt, and that this renowned and flourishing country became only a province of the vast Persian empire. Egypt never retrieved this mortal blow. That kingdom passed successively under the dominion of the Greeks and Romans. These events are only pointed at here. Their recital belongs to ages beyond the limits that I have prescribed myself.

In speaking of the civil institutions and politics of the Egyptians, I have hitherto contented myself with relating facts simply as I found them in ancient historians. Now that I think I have already laid before the reader every thing belonging properly to that object, it is time to propose some reflections on the political constitution and laws of that monarchy.

All antiquity is agreed in heaping eulogies on the Egyptians for the wisdom of their government. The most renowned personages of Greece, those whose parts and prudence are the most boasted, travelled into Egypt, to instruct themselves in the laws and customs of that nation^a. The Grecian legislators drew from that source their rules and principles of government^b. Modern writers have not only adopted the suffrage of the ancients; they have even gone beyond them in the matter: nothing can equal the idea they give us of Egypt. According to them, this country seems to have been once inhabited only by sages. We could not receive a more pleasing image from a republic of philosophers. But is not this picture rather too highly finished? Ought we not to bate a little of the high opinion commonly entertained of the politics of the Egyptians, and of the wisdom of their laws? We should examine into this without partiality and without prejudice.

Among the number of laws for which the Egyptians have deserved so much praise, I certainly shall not place that concerning thieves. They were ordered to enrol their names under a chief, and to carry directly to him whatever

^a Diod. l. i. p. 79. 80. 107.

^b Ibid. & p. 100.; Isocrat. in Eusrid. p. 329.; Strabo, l. 10. p. 738. D.; Plut. t. i. p. 41. F.

they should steal. Every one was sure to recover the goods he had lost, provided he could describe the number and quality of them; and fix upon the time and place where the theft was committed. A fourth of the value was left with the corps by way of ransom ^c. This regulation which does no great honour to the wisdom of the Egyptians, has been attempted to be excused. The legislator, say they, finding that he could not prevent stealing, wanted to furnish his countrymen with an easy expedient for recovering what had been stole from them ^d. But if we cannot entirely root out that wicked propensity of mankind to appropriate the goods of their neighbour, at least we ought not to authorise it; and surely this law had a direct tendency to it. Thieves were not only secure of impunity, but of reward also.

The Egyptian policy may be taxed upon a better foundation with the exorbitant power they had suffered to fall into the hands of their priests. Judges of the nation and masters of all affairs ^e, they possessed both temporal and spiritual authority. The sovereign himself was in some sort subordinate to them. His conduct from day to day was subject to their censure; and they had also the right of giving him advice ^f, and of directing all his actions. This is not all: by the primitive constitution of the monarchy, the throne of Egypt was hereditary; but it sometimes happened that the reigning family became extinct, and in that case the crown was made elective. The choice of the new monarch was limited; they were obliged to take him either from the body of priests, or from the state military: if the choice fell upon one of the last, he was obliged immediately to procure admission into the sacerdotal order ^g. But a priest in the like circumstance had no such obligation to the military order; so great a veneration had the Egyptians for their priests, the sole depositaries of the laws and of the sciences of the nation.

^c Diod. l. 1. p. 90. ; A. Gellius, l. 11. c. 18. p. 540. 541. ^d Diod. l. 1. p. 91.

^e See part 1. b. 1. art. 4. ^f Diod. l. 1. p. 81. 84.

^g Plato in polit. p. 550. B.; Plut. t. 2. p. 354.

We must be ignorant of the nature of mankind, if we do not perceive the inconveniencies of such a maxim. So much power, such flattering distinctions could not but encroach upon the sovereign authority, and inspire the priests with contempt for the rest of the nation, a contempt which must necessarily prove detrimental to the state. Herodotus gives us a very striking example of it in the reign of Sethon, priest of Vulcan, who was elected king some time after Sabacos ^a.

Sethon was scarce well settled on the throne, when he began his ill treatment of the military, as if he should never have occasion for their service, and even went so far as to deprive them of the heritages of land granted them by the kings his predecessors ^b. Sethon had soon cause to repent a conduct so imprudent. Sennacherib, King of Assyria, turning his arms against Egypt, there was found not a man among the nobles or the military state who would take arms. Sethon saw himself reduced to make head against the enemy with an army raised in haste, and composed of artificers, workmen, and people of the meanest professions ^c. He had been ruined, if Sennacherib had not got news of the approach of Tirhakah, King of Ethiopia, who was marching to the succour of Egypt at the head of a powerful army ^d. The priests, whose interest it was to make the most of an event which seemed to justify the conduct of Sethon, did not fail to give out, that Sennacherib was repulsed by a miraculous voice. They even invented a fable which attributed all the glory of it to Sethon ^e, but which is not worth examining. This example is sufficient to shew the bad effects of the too great privileges and distinctions enjoyed by the priests in Egypt.

I go on to the most important article of the Egyptian politics. The whole people was divided into a certain number of classes ^f. Professions were hereditary in every family;

^a Herod. l. 2. n. 14.

^b L. 2. n. 14.

^c Id. ibid.

^d Jos. antiq. l. 10. c. 1. ; 2 Kings c. 19. v. 9.

^e Herod. l. 2. n. 14.

^f See part 2. b. 1. c. 2.

the son being obliged to embrace that of his father^m. The two principal bodies of the state, the military and sacerdotal, were kept so separate and distinct, that a person of the sacerdotal race could not enter into the military state, and reciprocally no person of a military family could be admitted into the order of the priestsⁿ. This institution has been much praised. I am very far from passing such a judgment on it; on the contrary, I think it one of the most blameable and most pernicious. As we have here under consideration an essential point, a principle highly interesting to the happiness and support of states, it were good to examine and discuss with attention the advantages and inconveniencies which may result from the establishment of professions hereditary in families.

It may be alledged in favour of hereditary professions, that we make that best which we have always seen made, and which has employed us solely from our infancy; we acquire, of consequence, a much greater facility of excelling in an art; every one adds his own proper experience to that of his ancestors; by which means every art and every science must certainly be carried to the highest degree of perfection. Besides, this custom extinguishes all inordinate ambition; every one remains content in his station, and never desires to quit it by aspiring to a rank of more elevation. These are nearly all the advantages of hereditary professions; at the first glance, we are inclined to favour them. I think, nevertheless, that these reasonings are more specious than solid. Placing the matter in a truer light, we shall say, that such an institution is entirely contrary to sound politics, and to the fundamental maxims of society.

That noble ambition which is the animating soul and subsisting principle of states, can never be found in countries where professions are hereditary. This is the way to destroy all emulation. Let it not be said, that every man will exercise his own profession the better, for that he cannot leave it to embrace another. I assert, that he will exer-

^m Ibid.ⁿ Diod. l. 1. p. 84. 85.

cise his profession the better, when by excelling in it he may hope to attain to another more elevated. Besides, who does not see that genius and talents are fettered by this maxim? Such a one may be naturally unqualified for the profession to which he is doomed, who perhaps would have excelled in another had the choice been referred to his disposition. These reflections might be carried much farther; but as, in such sort of questions, experience proves more than reasoning, let us cast our eyes upon those nations who have distinguished themselves the most by the lights of their mind, and by the extent of their knowledge. We shall see, that it is not among the nations where professions were hereditary, that the arts and sciences have made the greatest progress.

This custom did not prevail in Greece; yet what a difference there is between the productions of the Greeks and those of the Egyptians? Let the admirers of ancient Egypt extol as much as they please, those enormous masses for which it is still famous. I shall do justice to the grandeur of those undertakings, and to the solidity of their execution. I admire the pyramids and obelisks, when I consider the expense, the patience, and the indefatigable labour which the construction of these monuments must have cost; but I am not equally touched with the taste and genius of the artists. I shall say the same thing of the sciences of which the Egyptians may have given the first tincture to the Greeks, but which these last carried to a point at which they never arrived in Egypt. A parallel between the Romans and Egyptians is not less unfavourable to the latter, although the arts and sciences are by no means the most shining part of the Roman character*.

Let us take a view of the nations that subsist at present, and make the same comparison among them. Two famous states present themselves in Asia; the Indians and the

* *Orabunt causas melius; coelique meatus
Describent radio, et surgentia sidera dicent:
Tu regere imperio populos, Romanæ, memento,
(Hæc tibi erunt artes), pacisque imponere morem, &c.*

Aneid. l. 6.

Chinese.

Chinese. In the Indies, the son is obliged to follow the profession of his father *. In China it is otherwise †. I am not more a partisan of the Chinese than another, and I am very far from looking upon them in the light in which some authors would place them. Nevertheless, we must allow, that none of the Asiatics can be compared with them; and that the arts and sciences are far enough from being as flourishing in the Indies as they are in China. I might bring in the Arabians in support of my assertion, if I wanted to enlarge upon the matter; but I shall close it with affirming, that not one nation can be cited, who kept their professions hereditary, and at the same time distinguished themselves by talents and by knowledge. I say, on the contrary, that this institution is only fit to contract the genius, and to arrest it in the progress it would otherwise make. This is moreover the least of the grievances which result from hereditary professions. We shall make it appear, that the like maxim must infallibly draw on the ruin of a state where it has place.

Daily experience proves, that families multiply unequally in all countries. It may happen, that one tribe may multiply to infinity. In that case, those who compose it having only one and the same trade to subsist by, will fall into poverty, and will become not only useless, but even chargeable to the state. On the other hand, many useful and essential arts are in danger of being lost by the decay of the tribes who are the depositaries of them. Besides, new necessities and new discoveries are constantly giving birth to new arts. How shall these arts be cultivated in states where every family is attached to a certain profession? It will be necessary then at every turn to create new tribes, and assign new ranks. Finally, there are arts which abolish themselves by our being experimentally convinced of their little utility. What will then become of the families which were the depositaries of them? and how will they be able to subsist and maintain themselves?

* Lett. édif. t. 5. p. 18. 19.

† Lett. édif. t. 24. p. 40.

However

However great these inconveniencies may be, there are still others of much more dangerous consequence.

What is the principal end of society? It is union and concord amongst its members. These inestimable advantages can never be found in states where professions are hereditary, and attached to certain families. This sort of division produces invincible aversion, very different from such sentiments as spring from difference of rank only, a difference which excludes not reciprocal attachments between inferiors and superiors. A body of men united and attached from their infancy to one certain profession, know and esteem only that profession, and regard all others with a sovereign contempt. From whence arise innate hatred, indelible jealousy, and mutual disdain among all the members of the state. Mutual good-will, mutual deference, and one common interest, are the prop and basis of every kind of government; all motives to which are destroyed by this wretched policy. It renders the greater part of the citizens useless to each other. It acts in direct contradiction to the intention of society; the end of which is to unite the minds of the persons composing the state, and to bring them to regard each other as brethren, and as members of one and the same body. It suppresses the most salutary effects which men ought to draw from the necessity and habitude of living together. In such states every one regards as an alien, as a kind of enemy, a man of another tribe than his own. Let us take one example more, and judge of the past by the present.

In all times, the people of the Greater India have been divided into different *castes* or tribes. In all times professions have there been hereditary in families, and the tribes have never been permitted to contract alliances with each other⁹. What is the effect of this fatal policy? Every tribe has its own language, its own religion, usages, customs, and particular laws^r. There are as many temples or pagods

⁹ Diod. l. 2. p. 153. 154.; Strabo, l. 15. p. 1029. 1033.; Arrian. de Ind. p. 530. 533.

^r Voyage de la Boulaye le Gouz. p. 159. 160. 122.; Voyage of Ovington, t. 1. p. 292.; Let. édif. t. 12. p. 67.

as there are tribes; no communication, no relation, all is separate and peculiar. Each pagod is served by the ministers of its own tribe¹. Every trade is confined to its own caste, and can be exercised only by those whose parents professed it¹. A man of an inferior caste, whatever merit he may have, can never rise to one superior². The sciences are inaccessible to every tribe but that of the Bramins and the Rajas³. Two men of different castes may not eat together, approach each other, nor converse familiarly⁴. They often come to blows on the subject of precedency⁵. One cannot conceive to what excesses the human mind may be carried by such prejudices and such infatuation⁶. There is such a caste held so low and contemptible, that those belonging to it dare not look a man in the face who is of a caste superior. If they did take that liberty, he would have a right to kill them on the spot⁷. I dare not affirm, that the division of the people into different classes, and the hereditary professions, produced as bad effects in Egypt; but if the consequence was the same, as is very probable⁸, what shall we think of the wisdom and foresight of their first legislators?

There was a fault still more essential in the constitution of the Egyptian government. Marriages were permitted between brothers and sisters⁹. That custom is entirely contrary to the rules and principles of good policy. It could be necessary only when the earth was void of inhabitants and needed peopling; but ought to have been abolished as soon as mankind began to multiply, and political societies to be formed. By the light of reason alone, most legislators perceived the inconveniencies which must result from marriages between brothers and sisters. They were sensible, that, without intermarriages, each family would form a separate and independent body in the state, by which means

¹ La Boulaye, p. 159. ; Voyage de Pirard, p. 277. ² Lett. édif. t. 5. p. 18.

³ Lett. édif. t. 24. p. 204.

⁴ Ibid. t. 26. p. 221. ; Memoires de Trev. Mars, 1701, p. 17.

⁵ Lett. édif. t. 12. p. 67. ; Voyage de Pirard, p. 273. &c. ; Anc. relat. des Indes et de la Chine, p. 123. 124. ⁶ Lett. édif. t. 12. p. 68.

⁷ Ibid. p. 96. &c.

⁸ Lett. édif. t. 12. p. 68.

⁹ See Herod. l. 2. n. 47. 167. ¹⁰ See part 1. book 1. art. 4.

all ties of common interest must necessarily be loosened. The Chinese proceed upon much wiser maxims than did the Egyptians. The laws of China not only forbid the marriage of brothers and sisters; they do not even permit alliances in the same family, be the affinity ever so distant^e. This is a very prudent law, and founded on the truest policy. It was established not only to unite all the subjects in one common interest, but also to prevent any particular family from combining and forming confederacies, a sort of union which is always prejudicial to a state.

What the partisans of the Egyptians most esteem in the character and genius of that people, is their attachment to their customs and their respect for their laws. They have bestowed the greatest praises on their constancy in observing them, and their strictness in permitting no deviation from the primitive usages of the monarchy. The introduction of a novelty was, say they, a prodigy in Egypt. All was done by precedent^f. The Egyptians disdained to borrow any thing from other nations^g.

Certain however it is, that the Egyptians can deserve no peculiar eulogium on this account. It is a principle common to all the eastern nations. We know, that the Orientals are strictly attached to their proper customs, and never change them. Their ways of thinking and acting are the same they ever were. Besides, it is agreed, that the temperature of the air and the position of climates have a considerable influence on the characteristic humour of a people. The always uniform temperature of Egypt is the cause of the solidity and constancy of the inhabitants. It remains to inquire whether this virtue pushed to excess, may not become a vice.

We cannot reflect too much, nor take too many precautions before we tamper with the ancient constitutions of a state, and attempt any alterations; this scruple, however, ought to have its bounds. It is certain, from experience, that a law may have been very good at one time, yet cease

^e Martini, l. 1. p. 31. ^f Plato de leg. l. 2. p. 789. l. 7. p. 886.; Diod. l. 1. p. 74.; Porphyry. de abstin. l. 4. p. 370. 371. ^g Herod. l. 2. n. 91.

to be so at another, and even become a grievance. It is equally true, that there are laws whose bad tendencies time only can discover. Circumstances change, and it then becomes necessary to change the political system also, to abolish the ancient laws, and to substitute new ones in their places. It is impossible that the first legislator should have foreseen every thing. Why should we not avail ourselves of useful discoveries made in other climates? Is an institution of less value because it is not our work? Or ought that motive to prevent our appropriating it, when the advantages which may result from it are evident? In a word, a rigid attention to the observation of ancient laws, and respect for antique customs, ought never to extend so far as to restrain the efforts of genius and imagination. Time only can give perfection to arts and sciences. New lights are acquired every day, and every day our views are rectified and extended. Experience lays open the errors and absurdities of ancient practices. It is then the part of good policy to reform the old and erroneous usages, and to invent and establish more suitable methods in their room. This nevertheless is what could not be done in Egypt. Constantly tied to the observance of primitive customs, they were not permitted to deviate from them on any occasion: the laws expressly forbade it^a.

The effect of this pernicious manner of thinking has been such, that, generally speaking, the oriental nations have made no proficiency in any kind whatsoever. They have drawn no improvement or advantage from their frequent commerce with the Europeans, but always limited and bound to their ancient usages, they are the same just now that they were 3000 years ago. I think the reason of this may be found in what I have formerly said on the establishment of hereditary professions in families. If they had permitted the introduction of new arts, they must have created new tribes, and suffered the depositaries of their ancient knowledge to perish with want.

^a Plato, Diod. Porphy. *locis supra cit.*

Notwithstanding the defects which we have here taken notice of in the Egyptian politics, we must, however, do justice to these people, and acknowledge that these imperfections are made amends for by many excellent maxims, and admirable principles, such, in a word, as are sufficient to make us conceive a very advantageous idea of their legislators.

The Egyptians were certainly acquainted with many of the truest maxims of government. This grave and serious nation easily comprehended, that the true end of politics is to make the people happy, and that they can only be so in proportion as they are inspired with sentiments of virtue and gratitude. With this view, the attention of the legislature was turned to conciliate mutual respect among the citizens, and to impress them with a just and ready knowledge of their relative duties. Hence those severe laws against murder, adultery, and rapes, and all those regulations invented and established for the security of the citizens against each otherⁱ. Hence that infinite respect they paid to old men. The youths were obliged to rise at their approach and yield them every where the first place^k. In fine, the legislature took care to carry the rules of civility to the greatest extent^l. These were so many civil and political ties invented to restrain licentiousness, and maintain peace and good order among the citizens; they were so many expedients adapted to inculcate sweetness of temper, and capable of preserving union, by banishing all the vices which proceed from harsh and unpolished characters.

From the same principle are derived the laws relating to the burial of the dead, the custom of embalming and depositing them in magnificent sepulchres, and that of regarding the dead body of a father as the surest pledge for the debt of his son^m. All these institutions tended to nourish filial love and veneration for parents. They who

ⁱ See part 1. book 1. art. 2.

^k Herod. 1. 2. n. 80.

^l Ibid.

D 2

^m Supra, p. 14.

had

had so great a respect for their fathers when dead, must certainly have treated them with deference when alive. That glory which is allowed the Egyptians of being the most grateful of all menⁿ, demonstrates the justness of the measures which the legislators had taken to ingrave that virtue in the hearts of their people.

But there is one custom of the Egyptians which deserves all the praises we can possibly bestow; it is that of bringing the memory of the dead into judgment, and making the lives of the deceased pass a rigorous examination before the honours of sepulture were decreed them. The trial was held in public. It was the people who decided and pronounced sentence^o; and certainly there could not on such occasions be a more competent judge. This was an excellent method for keeping the whole nation in their duty, the kings themselves not being exempt from it. History presents us with no custom more prudent or more politic, tending to inspire the citizens with the noblest sentiments of honour and virtue. Maxims like this have always been the foundation of such empires as are known to have subsisted the longest time, and with the greatest glory.

C H A P. V.

Of Greece.

I Have already indicated in the preceding volume a part of the revolutions which Greece underwent in the beginning of the ages which are now under consideration. There we saw how the return of the Heraclidæ into Peloponnesus had produced an entire change in the different principalities of that part of Europe^p. It must be remembered also, that about the same time Thebes and Athens, whose government had hitherto been monarchical, changed it into the republican^q. There were still other commo-

ⁿ Diod. l. 1. p. 101.

^p See part 2. book 1. c. 3. art. 6.

^o Ibid. p. 84. 103.

^q Ibid.

tions in Greece. Some kingdoms which had been formed originally came to an end, and some new ones were raised. Many cities, after the example of Thebes and Athens, erected themselves also into republics^r. The history of all these different states is not equally interesting.

We may affirm, that the knowledge of that of Athens and of Lacedæmon only is of any importance. These two cities, by means of the ascendant and superiority they acquired in Greece, directed the motions, and even modelled the genius of the whole nation. Athens and Lacedæmon were the leaders in all the principal events in which the Greeks were concerned: insomuch that if we carefully study the history of these two cities, we shall be perfectly well acquainted with the character, genius, and politics of the Greeks. I shall therefore content myself with laying open the Athenian and Spartan principles of government, with examining the form of it, and pointing out the differences between the governing maxims of these two republics.

A R T I C L E I.

A T H E N S.

Although the Athenians, like all the other states of Greece, were originally governed by kings, never any people were more strongly inclined to democracy. The power of their kings restrained nearly to the mere command of the armies, was nothing in time of peace^r. Plutarch observes, that in Homer's catalogue of the Grecian forces at the siege of Troy, the poet distinguishes the Athenians by the name *People*^s. Yet at that time they were governed by a king*. Homer, by this distinction, undoubtedly intended to make known the bent of the Athenians towards democracy, and give us to understand that

^r Pausan. l. i. c. 43. p. 103.

^s See part 2. book i. art. 7. ^t Iliad. l. 2. v. 54.; Plut. in Thet. p. 11. D.

* Mnestheus was then their king, who had taken the crown from Theseus.

the principal authority resided in the people. Upon the death of Codrus, a difference which arose among his children, furnished the Athenians, weary of monarchical government, with a pretext to abolish it.

Codrus, the prince who so generously sacrificed himself for his people, left two children, Medon and Nileus^u. Medon was the eldest, and in that right ought to have succeeded to the crown; but Nileus opposed it, under pretence that Medon being a cripple, such a deformity degraded the majesty of the throne^x. The Athenians referred the decision of this difference to the oracle of Delphos. The Pythian priestess pronounced in favour of Medon, and adjudged him the crown^y.

This decision which confirmed the right of Medon, ought to have removed all obstacles; but either the people had no regard for it, or, which is most likely, the sense of the oracle had an ambiguity, which the Athenians interpreted so as to favour their inclination to abolish monarchy^z. Be that as it will, they took occasion from thence to change the form of their government, and suppress the royal authority. Jupiter was declared sole monarch of Athens^a. For the government of the state they chose magistrates to whom they gave the name of *Archontes*. Medon had no advantage but that of being honoured with that dignity. The first Archontes were perpetual. He who was invested with that office, held it for life^b.

This new form of government subsisted 331 years. But the Athenian people, who were fond to excess of liberty without bounds, looked upon the perpetual archontate as too lively an image of royalty. Resolved to abolish even the shadow of it, they reduced the exercise of the archontate to ten years^c.

This reduction, however, did not produce tranquillity. Jealousy and the natural inquietude of the Athenians represented that space of ten years as too long and dangerous.

^u Pausan. l. 7. c. 2. *init.*

^z See Marsham p. 340.

^x Ibid.

^a Ibid.

^y Ibid.

^b Ibid.

^c Ibid.

With a view of oftener resuming the authority which they reluctantly intrusted to their magistrates, this distrustful people thought fit to abridge the time of their functions, and at last they reduced the term of the archontate to one year only ^d.

These revolutions exposed Athens to the greatest calamities. A power so limited as that of the archontes was insufficient to restrain restless spirits, become jealous to excess of liberty and independence. Factions and broils arose every day, and all concord was at an end ^e. It would be difficult to determine exactly what was the form of government at Athens till the time of Solon. Ancient authors have not explained themselves precisely on this subject. We find nothing in their writings which can give us a clear idea of it. It is very probable, that, for the internal government and preservation of the state, they observed most of the laws by which Athens was governed in the time of their Kings ^f.

Athens was in such a situation as must have drawn on its total ruin. Misfortunes instruct. The Athenians perceived that the state could not subsist amidst the troubles and dissensions which distracted it. They then considered how to check that spirit of independence which possessed the citizens. For this important work they cast their eyes on Draco, an illustrious personage, of known wisdom and probity, and well versed in divine and human laws ^g. They intrusted him with authority necessary to reform the state, and to publish such laws as might remedy grievances which it was high time to put an end to. As the name of Draco is found in the list of the Archontes, we may believe, that it was during his magistracy that he undertook to reform the republic.

We do not find that before Draco the Athenians had any body of laws reduced into writing ^h. They might indeed

^d Ibid. ^e Plut. in Solon. p. 84. 85. ^f See Pausan. l. 4. c. 5. *sub fin.*

^g A. Gellius, l. 1. c. 18. ^h Joseph. advers. Appion. l. 2. c. 6.

have had written laws ⁱ, but they had not compiled them, nor formed a code of them. The administration of the laws was so uncertain, that almost all the judgments were arbitrary. They had not even specified what actions were criminal, and what punishment should be inflicted on those who committed them ^k. Draco may be regarded as the first legislator of Athens ^l.

He was of a hard and austere character. His severity was extreme, and making no distinction between offences, he punished with death the slightful fault, equally with the most enormous crime ^m. Draco renewed also the law which ordered prosecutions against things inanimate, when they had occasioned the death of any one ⁿ. Being asked why he decreed capital punishment for all sorts of faults; because, answered he, the smallest appears to me worthy of death, and I have been able to find no other punishment for the greatest ^o. Herodicus said of the laws of Draco, that they seemed less the work of a man than of a dragon, alluding to the name of the legislator ^p. Demades, a famous orator, characterised them very well, when he said they were not written with ink, but with blood ^q. Aristotle does not appear to have made a great account of them, since he says that they were remarkable for nothing but their cruelty ^r. There remains nothing of the laws of Draco, except some scattered fragments in different authors ^s. We do not find that this legislator changed any thing in the form of government ^t. He only constituted a new court called the *Ephetes* ^u. This tribunal composed of fifty-one judges, chosen amongst those of the greatest distinction in the state, became the chief tribunal of Athens. They

ⁱ Demosthenes speaks of a law of Theseus wrote upon a pillar of stone. In Neaeram, p. 673. C.

^k See part 2. book 1. art. 8.

^l A. Gell. 1. 1. c. 18.

^m Plut. in Sol. p. 87. E.

ⁿ Ibid.

^o Ibid.

^p Arist. rhet. 1. 2. c. 23. p. 579. B.

^q Plut. *loco supra cit.*

^r Polit. 1. 2. c. 12. p. 337. C.

^s Thyfius has made a collection of them, apud Gronov. thes. Gr. antiq. t. 5.

^t Arist. *loco cit.*

^u Pollux, 1. 8. c. 10. segm. 124. 125.

appealed

appealed to them from the decisions of all the other jurisdictions, as the sole judges in the last resort. This great lustre of the Ephetes was not of long duration. The Areopagus humbled by Draco, resumed its ancient splendor under Solon.

The laws of Draco were too violent to subsist long, if they had been strictly executed; the law would have destroyed more citizens than the scourges of heaven, or the sword of the enemy. They were obliged therefore to soften the rigour of them; and the extreme severity of these laws led into the opposite excess, licentiousness and impunity. Factions and divisions were renewed with greater force than ever. They relapsed into their first troubles. The republic split into as many parties as there were different sorts of inhabitants in Attica*. They were ready to come to the worst extremities. In this danger they had recourse to Solon, who, by his rare qualities, and particularly by his great moderation, had acquired the affection and veneration of the whole city†. They pressed him to labour the cessation of discord, by taking upon himself the management of public affairs.

Solon hesitated long before he would charge himself with a commission of so much difficulty‡; at length he was elected Archon, without the form of drawing lots as in other elections§, and with unanimous consent they named him sovereign arbiter and legislator of Athens¶.

Solon, invested with absolute authority, and master of the hearts of his fellow-citizens, applied himself strenuously to reform the government of Athens. He conducted himself with all the firmness and prudence requisite in a statesman. Although he knew perfectly the whole extent of the evil, yet he did not think it expedient to correct certain abuses which appeared too strong to be remedied. He undertook no changes, but such as he hoped to make the Athenians relish by means of reason, or force them to accept by the weight of authority, wisely tempering, as he said

* Plut. in Sol. p. 85. † Plut. ibid. ‡ Plut. ibid.

§ Alian. var. hist. l. 2. c. 10.

¶ Herod. l. 1. n. n. 29; Plut. p. 87. E.

himself, force with lenity. Thus being asked, whether the laws which he had given the Athenians were the best which could have been prescribed them? yes, says he, the best that they were capable of receiving ^c.

Solon began with repealing all the laws of Draco, except those which regarded murderers ^d. He then proceeded to the police of the state, that is to say, to the distribution of offices, dignities, and magistracies. He left them all in the hands of the rich, whom he distributed into three different classes relative to their different abilities. Those whose revenue amounted annually to five hundred measures, as well of grain as of dried fruits and drinks, composed the first class. In the second were ranked such citizens as had three hundred, and could maintain a horse in time of war. In the third were placed those who had two hundred ^e. The fourth and last class comprehended all hirelings, and such as lived by their labour ^f.

The citizens of this class were never admitted into offices. Solon gave them only the right of voting in the public assemblies. This privilege, which at the beginning appeared of little consequence, became in the end very considerable, and rendered the people absolute masters of affairs, seeing the greater part of law-suits and differences were brought back to the people by right of appeal from all the sentences of the magistrates. Besides, as the laws of Solon had the defect of being written with much obscurity, they perpetually wanted explanation; and the public assemblies had the sole right of determining what sense ought to be given them ^g. It was also in these assemblies, that the greatest affairs of the state were decided, such as peace and war, treaties, the regulation of the finances, &c.

Thus the constitution of the government of Athens was purely democratical; that is, all the authority was in the hands of the people ^h. It appears, that Solon was sensible

^c Plut. in Sol. p. 86. C. ^d Ælian. var. hist. l. 8. c. 10.; Plut. p. 87. E.

^e Arist. polit. l. 2. c. 12. ^f Plut. p. 87. E. ^g Arist. Plut. *locis cit.*

^h Plato in Menex. p. 59.; Demosth. in Neæram, p. 875. C.

of the inconveniencies of the excessive power which he had trusted to the multitude. He considered how to give it a check; and, in this view, he chose out of every tribe, a hundred persons of merit, of whom he composed a new council called *the senate*. As in the time of this legislator there were only four tribes, the number of the senators was 400. The people could only make decrees on what had been debated and proposed in the senate ⁱ. Before the senate could assemble, the subject on which they were to deliberate was to be publicly notified ^k. After the affair had been examined, they read to the people what had been concluded in the senate. Those who had a mind to speak, then mounted the tribunal of harangues. When afterwards they came to vote, the public crier began with calling with a loud voice the citizens who had passed the age of fifty years ^l, and proceeded to those of thirty; for that age must have been attained before any one could have right of suffrage in the public assemblies. In the first place, they decided whether the affair should be put under deliberation. In effect, the people had the power either purely and simply to reject the decree of the senate, or to order the execution of it after examination ^m. It is on this subject, that Anacharsis said one day to Solon: "I wonder, that, among you, sages should only have the right of deliberating, while that of deciding is reserved for fools ⁿ."

To re-establish the authority of the Areopagus depressed by Draco, had been one of the first cares of Solon. To this august court he committed the general inspection over the whole state, and the care of seeing the laws observed, of which he made them the guardians ^o. It is unnecessary to enter into any detail of the civil regulations of this legislator, they are sufficiently known. We know the homage paid by the Romans to the laws of Solon, some of which subsist to this day, seeing they were the foundation of the Roman law adopted by almost all Europe. It appears, that Solon

ⁱ Plut. p. 88. D.

^k Potteri archeol. l. 1. c. 26. p. 122.

^l Plut. t. 2. p. 784. C.

^m See Sigon de rep. Athen. l. 2. c. 34.

ⁿ Plut. in Sol. p. 81. B.

^o Plut. p. 83. F.; Athen. l. 4. c. 19. p. 168.

had borrowed many of them from the Egyptians^r. They engraved them upon rolls of wood set into frames, in such a manner as to be easily turned round^s. These monuments were first deposited in the citadel, and afterwards in the Prytaneum, to the end that all the world might have access to consult them^t. Some of these frames and rolls subsisted still in the time of Plutarch^u.

To explain the constitution of the government of Athens, is to make known its defects. Every state where the people judges and decides, is essentially vitious. How in effect is it possible to debate affairs in assemblies so numerous? How is it possible even to be heard? We may judge of the multitude of auditors composing the assemblies at Athens, by the number of suffrages which the law exacted when a citizen was to be banished by the ostracism, or a stranger to be adopted. In either case, six thousand votes at least were necessary^v. What troubles moreover must not have been occasioned by party-divisions, and the diversity of opinions, interests, and private views?

Solon, to make use of an expression of Plutarch, had believed that the government of Athens, fixed and secured by the Areopagus and the senate of four hundred, as by two firm and immoveable anchors, would cease to be agitated and tormented^w. The success however did not answer his expectation. Never state was more agitated, or

^v *Solon sententiis adjutus Ægypti sacerdotum, latis jussu moderamine legibus, Romano quoque juri maximum addidit firmamentum.* Amm. Marcell. l. 22. c. 16. p. 346.

It is true, that, according to Herodotus, l. 1. n. 29. and Plut. p. 92. Solon was not in Egypt till after he had published his laws; but this legislator either understood the laws of Egypt before his voyage, or else he added to those laws, and corrected them by the knowledge he had acquired in Egypt; for it is certain, even by the testimony of Herodotus, Diodorus, and Ammianus Marcellinus, that Solon had borrowed many laws from the Egyptians. See Herod. l. 2. n. 177.; Diod. l. 1. p. 88. 90.; Amm. Marcell. l. 22. c. 16. p. 846.

^s Plut. t. 1. p. 92. B. t. 2. p. 79.; A. Gellius, l. 2. c. 12.; Suid in *Αἰῶνες*, t. 1. p. 240. in *Κυβερνήτης*, t. 2. p. 400.

^t Poll. l. 8. c. 10. segm. 128.

^u Plut. *supra*.

^v Demosth. in *Neacram*, p. 875. E.; Pollux, l. 8. c. 5. segm. 20.; Plut. in *Aristide*, p. 322. F.

^w In Sol. p. 88. E.

torn by more cruel dissensions. The cause can only be attributed to the too great authority possessed by the people. "The rashness and licentiousness of the popular assemblies have ruined the republics of Greece," says Cicero*. I add, and particularly that of Athens.

Solon had indeed foreseen the abuse which the people would make of the power which he had intrusted to them, and had therefore devised a check to restrain them; but this check was not sufficient. The Areopagus had no part in the government; and the senate depending itself upon the people, could not repair a constitution of state essentially bad and defective. There was even a radical vice in the constitution of this senate designed for a restraint upon the people. It was too numerous. Composed in its original of 400 persons, it afterwards consisted of 600. Experience has always manifested, that the talents of the greatest men are cramped when they are assembled; and that where there is the greatest number of sages, there is also the least wisdom†.

We commonly view the Athenians on their favourable and advantageous side. We are struck with the shining images of the history of Athens, and imposed upon by its lustre. We are dazzled by the battles of Marathon and Salamis, by the pomp of the spectacles, by the taste and magnificence of the public monuments, by that croud of great men excellent in every way, which will render the name of Athens for ever precious and memorable. Nevertheless, if we would examine the interior state of this republic, very different scenes would present themselves‡. We should see a state in incessant combustion, assemblies always tumultuous, a people perpetually agitated by brigues and factions, and abandoned to the impetuosity of the vilest haranguer; the most illustrious citizens persecuted, banished, and continually exposed to violence and injustice*. Virtue was prescribed at Athens, and services done their

* Pro Flacco, n. 7. t. 5. p. 244.

† See Plato in Alcib. 10. p. 448. B.

‡ Persian letters, let. 106.

* Id. in 2. p. 451. 456.

country forgot, nay often punished by the ostracism. What a government was that where the sight of such citizens as had best served the state was odious and insupportable! Valerius Maximus had reason to exclaim, "Happy Athens, after such unjust treatment, still to have found citizens who loved their country^b." The history of all the other people of Greece cannot furnish near so many examples of injustice and ingratitude towards the benefactors of the state, as does the single city of Athens.

It cannot, however, be denied that good nature, generosity, and even greatness of soul, formed the general and predominant character of the Athenians. We might cite a thousand examples. I shall relate no other than the law which ordained the conducting into the right road whosoever had happened to lose it^c. But the populace will always be populace; every where fickle, capricious, unjust, cruel, and hurried away by the first impressions. Every individual Athenian was naturally good-natured, affable, obliging; but in the public assemblies it was no longer the same man^d. Aristophanes represents the people of Athens under the emblem of an old man, very sensible at home, but who falls into dotage in the public assemblies^e. The unequal conduct of the Athenians disgusted their allies, and at length entirely alienated them. It was still more insupportable to the cities of their dependence. They treated them with the utmost rigour^f. Those cities were forced to endure the caprices of a people flattered and perpetually seduced by their orators; that is to say, according to Plato, something more dangerous and more terrible than the caprices of a prince spoiled by the flattery and homage of a few inconsiderable courtiers.

^b L. 5. c. 3.

^c Ciceró de offic. l. 3. n. 13.

^d See Plato de leg. l. 3.; Xenophon de rep. Athen.; Polyb. l. 6. c. 8.; Ælian. var. hist. l. 2. c. 19. l. 3. c. 18. l. 5. c. 13.

^e In Equit. act. 2. scen. 2.

^f See Casaubon in Athen. p. 114. 175.

ARTICLE II.

LACEDÆMON.

WE have seen in the second part of this work, that 80 years after the taking of Troy, the descendents of Hercules retook possession of Peloponnesus. They then marched under the conduct of three principal chiefs, Aristodemus, Temenes, and Ctesiphon. These conquerors parted amongst them the countries of which they had made themselves masters. Temenes had the Argolis. Messenia fell to Ctesiphon. Aristodemus dying in the course of this expedition, his two sons Euristhenes and Procles took his place, and had for their share Laconia ^s.

These two princes did not think fit to divide the domain adjudged to them. Neither did they reign alternately, as Eteocles and Polinices had formerly agreed to do at Thebes; but whether in virtue of their father's orders, or from some other motives which we are ignorant of, they governed conjunctly and with equal authority, each of them bearing the title of *King of Lacedæmon*, and being acknowledged in that quality. What is the most astonishing, is, that these two brothers had the strongest antipathy for each other. They never agreed; and all their life was passed in continual discords: even their descendents inherited that fatal misunderstanding ^h. For this form of government did not end with them. The sceptre remained conjunctly in these two branches which subsisted about 900 years, during which time they gave kings to Sparta from father to son without interruption. Thirty are reckoned in the line of Euristhenes, and twenty-seven in that of Procles. These two families became extinct nearly about the same time: remarkable singularities these, and

^s Supra, part 2. l. 1. c. 3. art. 6.

^h Herod. l. 6. n. 52.; Pausan. l. 3. c. 1. p. 205. 206

of which I believe no example is to be found in any other nation.

The revolution which had ravished the sceptre from the descendants of Pelops to restore it to the Heraclidæ, had caused all the horrors of war to be felt in Peloponnesus. The inhabitants driven from their heritages had been constrained to fly, and to seek an asylum in the neighbouring provincesⁱ. The country was left a desert. The first care of Euristhenes and Procles was to think of means to repopulate Laconia. The more readily to attain this end, they determined to receive all strangers who should come, let their reasons for retiring thither be what they would; and in order to fix them, they granted them the rights and privileges of natives and citizens^k.

The two kings then divided all Laconia into six parts. They chose Sparta for their capital, and established there their residence. From this seat of government, they sent rulers into the cities of their dependence to signify their orders to the people^l. We are ignorant as to the rest, what were then the laws and maxims of government. From this epocha till the reform of Lycurgus, the history of Sparta is very obscure. We shall pass over these times of darkness, and proceed to the age of this famous legislator.

Although the regal power was established, and constantly subsisted in the two branches of the reigning family, the state felt at last the effects of the discords which this divided authority could not fail to occasion. The two kings formed each a party to which every one attached himself according to his interests or particular inclination. These intestine divisions forced the sovereigns to seek, in emulation of each other, means to gain the affection of their subjects. They had recourse to such relaxations of authority as insensibly became very prejudicial to the maintenance and tranquillity of the state.

ⁱ Supra, part 2. l. 1. c. 3. art. 6.

^k Strabo, l. 8. p. 560. 561. 562.

^l Arist. polit. l. 2. c. 9. p. 329. E.; Strabo, p. 560.

Eurypont or Eurithion, grandson of Procles, was the first who, to please the people, remitted something of the absolute authority which the kings of Sparta had always enjoyed: A condescension which produced horrible confusion and unbridled licentiousness: a source of an infinity of mischiefs which long afflicted the state. The people, instead of growing more tractable, became only the more insolent. Liberty degenerated into independence. The Kings had no longer any authority. They even dared to attempt their sacred persons. Eunomes, the father of Lycurgus, lost his life in a sedition^m. In the midst of these troubles and anarchy appeared Lycurgus, whose prudence and firmness wrought an entire change in the government of Lacedæmon.

This famous legislator might easily have mounted the throne upon the death of his elder brother, who had left no male issue: he even reigned some months. But having learned that the queen his sister-in-law was pregnant, he declared that the crown belonged to the child which should be born, if it were a son. He kept his word; and the queen being delivered of a prince, Lycurgus declared him king, and from that instant divested himself of the sovereign powerⁿ.

A conduct so generous did not lay the suspicions which some enemies of Lycurgus had designed to raise of the uprightness of his intentions. To calm these and dissipate them entirely, this great man condemned himself to a voluntary exile. He undertook many voyages, with a view of consulting the most able and experienced sages in the art of governing. He went first to Crete; then passed into Asia; and lastly travelled into Egypt, then the abode of science and politics^o.

Lycurgus had governed the state but three months, but that time was sufficient to make known his abilities. His virtues had attracted the esteem and veneration of all his

^m Plut. in Lycurg. p. 40.

^o Plut. p. 41. 42.

ⁿ Plut. p. 40, 41.

fellow-citizens^p. His absence made them still more sensible of their value. Disorders had so increased in Sparta, that the whole state sent deputies several times to press his return^q. This disposition of the minds of the citizens determined Lycurgus to revisit his country. He immediately resolved to change the form of government, persuaded that the establishment of some particular laws could bring no relief to the evils he wanted to cure^r.

Before he executed his design, he went to Delphos to consult Apollo upon the design he meditated. The god approved it. He received the most favourable answer. The priestess saluted him the friend of the gods, exclaiming that she knew not whether she ought not to regard him as a divinity rather than a mere mortal. Then she assured Lycurgus, that Apollo had granted his petition, and that he should form a state the most excellent that had ever existed^s.

We easily conceive what credit and authority Lycurgus acquired by such a sanction, and how much it assisted him in removing difficulties. On his return to Lacedæmon, he began by gaining the most eminent of the city, by communicating to them his designs. Being assured of their consent, he engaged them to meet in arms in the public square, to astonish and intimidate those who should attempt to oppose his projects^t. He met with no obstacles, and did whatever he pleased.

I shall pass over in silence the detail of the institutions and ordinances of Lycurgus. I shall only remark, that this legislator did not think fit to commit his laws to writing: he even very expressly forbade it. He wanted to imprint them into the minds and hearts of his fellow-citizens^u, and he succeeded. It is observable also, that this legislator would make no civil law^v.

It would be difficult, as to the rest, to give a just and precise idea of the political government of Lacedæmon.

^p Plut. p. 41. A.

^q Plut. in Lycurg. p. 42.

^r Ibid. p. 47.

^s Plut. p. 42.

^t Ibid.

^u Id. ibid.

^v Ibid.

Plato himself agrees, that it is not possible to define it ^y. In effect, the government of Sparta was, properly speaking, neither monarchical, nor aristocratical, nor democratical; it was mixed, and participated of all these different kinds of political constitutions.

There were two kings at Sparta, but their power was weak and greatly circumscribed. It does not appear, that their will had any considerable influence in the state, or that they had any great credit in the public deliberations ^z. They were, properly speaking, only the first citizens of the state ^a; they acknowledging a superior authority in the Ephori and the people, to whom they were accountable for their conduct ^b. However, they enjoyed great privileges, sufficient to distinguish them honourably. Their persons also were held in the greatest respect and consideration ^c.

The senate composed of twenty-eight elective members, was originally possessed of a very extensive authority. This body had been instituted by Lycurgus to maintain an equilibrium between the kings and the people; the senate siding with the kings when the people wanted to ingross too much power, and on the contrary supporting the interests of the people, when the kings appeared too enterprising ^d. The kings assisted in the senate when they thought proper, and had the privilege of a double vote ^e. The senate alone had the right of examining affairs, and proposing them in the public assembly; but when they had given their opinion, the people were the masters either to approve or reject it ^f. The senators, as I have already

^y De leg. l. 4. p. 829. D. See also Arist. polit. l. 4. c. 9.

^z See Thucyd. l. 1. n. 79. 85. 87.; Arist. polit. l. 3. c. 14.

^a See Herodot. l. 6. n. 56.

^b Herod. l. 6. n. 82. 185.; Thucyd. l. 5. n. 60. 63.; Diod. l. 12. p. 533.; Plut. t. 1. p. 806. F.

^c Herod. l. 6. n. 56.; Plut. t. 1. p. 804. ^d Plut. t. 1. p. 42. E.

^e Herod. l. 6. n. 57. Thucydides pretends that each king had but one vote, l. 1. n. 20.

^f Plut. in Lycurg. p. 43. B.

said, were elective. It was by vote and in their assembly, that the people proceeded to that important choice ^g.

The power of the senate appeared very soon too strong and absolute. It was resolved to give it a check, by opposing to it the power of the Ephori. This establishment took place about 130 years after Lycurgus ^{*}. The Ephori were five in number ^h, and remained only a year in office ⁱ. They were chosen by the people, and often taken from amongst those of the lowest condition ^k. Established to defend the rights of the nation against the enterprizes of the kings and of the senate, they had a good deal of resemblance with the tribunes of Rome. Although their magistracy was limited to a year, they became so powerful, that, in the end, the whole authority rested in their hands. The Ephori had a power to expel the senators, to put them in prison, and even to punish them with death ^l. The kings were obliged to obey them at the third summons ^m. They had a right to fine them, and put them under arrest ⁿ. When the kings entered the senate, the Ephori were dispensed with rising at their approach ^o; but the kings were obliged to pay them that mark of respect ^p. Every month they renewed the oath of fidelity to the state, the Ephori in the name of the republic, and the kings in their own name. The kings obliged themselves by oath, and promised to govern according to the laws and customs. The oath that the Ephori took in the name of the republic, was, that they would maintain the persons and authority of the kings as long as they should exactly observe their promises ^q. For a further check upon the kings, these magistrates had contrived a very singular expedient founded on the ignorance and superstition of the people.

^g Arist. polit. l. 2. c. 9. p. 330. 331.; Justin. l. 3. c. 3.

^{*} The ancients are not agreed upon the time of the institution of the Ephori. The greatest number, however, refer their original to Theopompus, who reigned 130 years after Lycurgus.

^h Paus. l. 3. c. 11.

ⁱ Cragius apud Gronov. thes. Gr. antiq. t. 5. p. 2570.

^k Arist. polit. l. 2. c. 9. p. 330. A.

^l Xenophon de rep. Lac.

^m Plut. in Agid. & Cleom. p. 800. E.; Corn. Nepos in Agesil. n. 4.

ⁿ Corn. Nepos in Paus. n. 3. & 5.

^o Xenoph. de rep. Laced. sub fin.

^p Plut. t. 2. p. 817. A.

^q Xenoph. loco cit.

Every nine years the Ephori chose a night with a very clear and serene sky. They sat down in the open fields, keeping a profound silence, and their eyes fixed upon the heavens. If they saw a star fall, that is to say, if they perceived one of those luminous exhalations which we often see shoot along the sky, they immediately accused the kings of having incurred the anger of the gods. They suspended them from their functions till they should receive from the oracle an order for their re-establishment^r.

The Ephori had also the charge of watching the conduct of the queens^r. Lastly, they had the keeping of the public treasure^r, and the general inspection over all the state^r. Aristotle justly blames the establishment of these magistrates^r. They caused the same disorders at Sparta, as the tribunes of the people at Rome.

The people also had great authority at Sparta, and a considerable share in the government^r. The public assemblies solely decided the affairs of the state^r. It was also in these assemblies that the election of the magistrates was made^r.

The government of Lacedæmon, where the authority was divided by five different bodies, two kings, a senate, five ephori, and the assembly of the people, is a kind of political paradox. The opposition of all these different powers which reciprocally thwarted each other, should in all appearance have been a perpetual source of intestine troubles and dissensions. Nevertheless we meet in history with no state which has been less agitated than that of Sparta; and Polybius says, that of all the people known in history, none had so long preserved their liberty^b. This certainly was not the effect of a government so defective in its constitution as was that of Lacedæmon. We can therefore ascribe the cause only to the laws of Lycurgus. So long as they were exactly observed, the interest of the state prevailed

^r Plut. in Agid. & Cleom. p. 800. B.

^r Plato in Alcibiad. 1^o. p. 441. A.

^r Ælian. var. hist. l. 2. c. 5.

^r Plato de leg. l. 4. p. 829. D.

^r Plut. in Lycurg. p. 43. B.

^r Xenoph. de rep. Laced. sub fin.

^r Polit. l. 2. c. 9. p. 330.

^r Thucyd. l. 1. n. 79. 85. 87.

^b L. 6. c. 6. p. 491.

over all private considerations, and Sparta was the terror of her neighbours. Her ruin followed as soon as she lost sight of them.

In effect, we cannot but allow that there was a great fund of wisdom and prudence in the laws of Lycurgus. They have been the admiration of the most famous politicians of antiquity, and justly too, even though they were to be judged by the event. But let us take it along with us, that these regulations could only be proper for a state of small extent, and were really practicable only amongst a people who were not numerous, such as those of which Greece was composed. In the time of Lycurgus, they reckoned in Sparta only nine thousand inhabitants ^c, and thirty thousand in the country ^d. In so small a state a people may be educated and governed like a single family. From this principle, I shall say with Polybius, that the form of the government of Sparta was well enough adapted to it, as long as the Lacedæmonians aimed not at extending the bounds of their dominions. But this same government became imperfect and defective from the moment that Sparta suffered herself to be hurried away by views of ambition, and conceived projects of advancement ^e.

A R T I C L E III.

Of the Greek Colonies.

THE attention which I have given to the history of Athens and of Lacedæmon, has occasioned the omission of an event which ought not however to be forgot. I mean the number of Grecian colonies, which, about the beginning of the ages we are going through, quitted their mother-country, and went to form establishments in many parts of Asia and Europe. In the preceding volume I have indicated the cause of those emigrations. There we saw

^c Herodot. l. 7. n. 234.

^d Plutarch. in Lycurg. p. 44. B.

^e Polyb. l. 6. c. 6. p. 491. See also the *Esprit des loix*, l. 4. c. 7.

what had been the effect and consequences of the revolution which Greece underwent when the Heraclidæ came and wrested the sceptre from the descendents of Pelops, about 80 years after the taking of Troy. The most renowned and celebrated of these colonies, were those which were formed in Asia by the Ionians, the Æolians, and the Dorians.

The Trojan war had given the Greeks an opportunity of acquiring a pretty exact knowledge of the Lesser Asia. The Ionians anciently established in Attica, but afterwards settled in Peloponnesus, had remained there in tranquillity till such time as the Heraclidæ came to retake possession of it. The Achæans, at that time driven from Laconia, fell upon the Ionians, and constrained them to quit Peloponnesus. The Ionians took refuge in Attica^f; but having multiplied to such a degree that the country could no longer maintain so great a number of inhabitants, Nileus, that son of Codrus whom the Athenians had rejected^g, placed himself at their head, and conducted them into Asia. They took possession of a country which was then bounded by Caria and by Lydia. It is that which from them was afterwards called *Ionia*. There they built twelve cities, Ephesus, Colophon, Clazomena, &c.^h

This colony had been preceded by another emigration, which is not less famous in history. Those of the Achæans who descended from Æolus, having been driven from Laconia by the Dorians, who returned into Peloponnesus with the Heraclidæ, found themselves obliged to seek for new landsⁱ. They put themselves under the conduct of Penthileus, that son of Orestes who had been dethroned by the Heraclidæ. After some rambling they fixed themselves in the Lesser Asia, between Ionia and Mysia, and gave that country the name of *Æolia*. Smyrna and many other cities owe their foundation to that colony^k.

^f See part 2. l. 1. c. 3. art. 6.

^g Supra, p. 27. & 29.

^h Marm. Arund. ep. 26.; Paus. l. 7. c. 2. init.; Ælian. var. hist. l. 8. c. 5.

ⁱ See part 2. l. 1. c. 3. art. 6.

^k Strabo, l. 13. p. 872.; Vell. Patere. l. 1. n. 2. 4.

The third colony which passed about the same time from Greece into Asia, was composed of Dorians. They had accompanied the Heraclidæ in their expedition against the Athenians in the reign of Codrus. The Heraclidæ were beaten; but their defeat did not prevent their seizing the country of Megara, and giving it to the Dorians. A part of this people remained in that country; some of them passed into Crete; but the far greatest number established themselves in that part of the Lesser Asia which from them was called *Doria*. There they built Halicarnassus, Cnidos, and other cities. They also spread themselves into the islands of Rhodes, Cos, &c.¹

I shall say nothing of several other colonies which went from Greece about the same time, and shall pass over in silence those considerable settlements which we know were made by the Greeks in Italy^m, in Sicilyⁿ, on the borders of the Pontus Euxinus^o, and as far as the coasts of Africa^p. This detail would lead us too far. The colonies of the Lesser Asia are without contradiction the most famous of all those which were ever formed by the Greeks. They prove sufficiently to what a height this part of Europe was formerly peopled. We are astonished, that so inconsiderable a nation as the Greeks, shut up in the compass of a country not equal to a fourth part of France, should have been in a condition to send out almost at the same time so great a number of colonies.

This perhaps would be the proper place to propose some reflections on the facility and inclination which the ancients had to form and send so many colonies into countries often remote. One might dwell upon that usage which singularly characterises the ages of which I am now speaking. One might also conclude with much probability, that families multiplied much more at that time than they appear to do now. There might be room for forming many reasonings on the cause of that restless humour which rendered the

¹ Strabo, l. 14. p. 965.

^m Martham, p. 510.

ⁿ Id. p. 463.

^o Id. p. 516.

^p Id. *ibid*.

ancients so subject to migrations, and which led them to change their abode with a facility that always astonishes us at present. In effect, many ages passed before the greatest part of the ancient nations were well established or fixed for a continuance in the same district. All these different objects which I have here indicated, would undoubtedly deserve to be examined with great attention; but this discussion would divert us too much from the principal object which ought to employ us in the present article. I return therefore to the Grecian colonies.

I see nothing particular to say on the form of government followed by the different colonies of which I have been speaking. As most of these transmigrations were made only about the time that the republican spirit began to be predominant in Greece, the colonies which went from it conformed themselves to those ideas, and adopted, in consequence, the republican government. As to the laws, civil and political, that they established originally, it is to be presumed, that, in their beginnings, they differed little from those of which I had occasion to give an account in the second part of this work, in explaining the ancient government of Greece ^a. In process of time only it became necessary to make such alterations as were suitable to the particular position of each colony.

I shall carry no further my researches into the Grecian history. My intention is not to deliver all that may be found worth notice in a nation so worthy of our study and of our attention. I shall only say a word on the revolution which was wrought in the government, manners, and genius of the different states of Greece, during the ages here under consideration.

Greece in one sense comprehended but one and the same people, and, till about the middle of the ages we are now going through, a pretty close uniformity of manners prevailed. But, from that epocha, there is to be observed a great variety and disagreement in the manners and conduct of the

^a See book I. c. 3. art. 8.

different states which composed the Greek nation. It is easy to penetrate the cause, if we reflect but a little on the events of which this part of Europe was the theatre.

Government and manners had been originally the same or nearly alike in the different states of Greece, although founded by various colonies. Let us run through the first ages of the history of Athens, of Argos, of Sicyon, Thebes, Sparta, Corinth, Mycenæ, we shall observe no difference in the administration of these different states. We see the same uniformity subsist for many ages, and till after the return of the Heraclidæ into Peloponnesus. As yet the Greeks were very ignorant in arts and sciences, in commerce, navigation, the art military, and politics. This I have proved sufficiently in the second part of this work, where I endeavoured to make known the state of the Greeks in relation to all these different objects. That nation was then unenlightened and very poor, quiet of consequence, and without ambition. Some ages after the return of the Heraclidæ, the appearance of things was changed. The Greeks began to acquire knowledge; immediately a general revolution in genius was effected, a universal impulse was felt. Here begins the epocha of that variety, and of that opposition which ever after reigned in the manners of the different people comprehended under the name of Greeks: oppositions which however did not become very perceptible till some time after Lycurgus and Solon. Then all the different republics of Greece completed their form of government and constitutions, and, by a necessary consequence of events of this kind, their primitive turn of thinking changed also. Each state opened its eyes on its own interests, and formed laws and maxims relative to its position and particular views. A general attention was roused to the objects of politics, arts, and commerce. Factions arose along with ambition and luxury. Even the riches of genius with which the nation was so abundantly provided, were made the best of. Orators as well as philosophers acquired from this moment a degree of esteem, credit, and authority, beyond the example of any other country.

This

This change was not advantageous to Greece. The opulence of some of the republics inspired them with thoughts of ambition and rivalry. Insensibly a spirit of incroachment and domineering seized the different states of that part of Europe. Each of them affected superiority, and aspired to the direction of the whole nation. The general interest disappeared, and was sacrificed to particular views. Greece then was torn with factions and intestine divisions. In vain did the patriots attempt to raise their voice, and represent the fatal consequences of these quarrels; they were not listened to. The republics seduced and led by fiery orators, tore each other to pieces, and engaged continually in the most bloody and obstinate wars. The issue was most fatal to the nation. The advantages which the Greeks alternately gained over each other, began by mutually weakening them, and ended by sowing in all hearts, such seeds of hatred and animosity, as rendered for ever irreconcilable all the different people comprehended under the name of Greeks. It is thus that they paved themselves the way to ruin by reciprocal losses, and by a conduct which put them out of condition of uniting to defend the common liberty. This misunderstanding joined to the weakness occasioned by a train of continual wars, at length ruined Greece, and forced her to submit for ever to a foreign yoke.

B O O K II.

Of Arts and Manufactures.

THE objects which we are about to examine in this third part of our work, are of a kind something different from those which employed us in the preceding volume. There we examined the origin and progress of the arts among the most ancient people. To fulfil this design, we were obliged to enter into many details which would now be superfluous. The ages which we are now surveying, offer us nothing new of this kind. With the exception of the Greeks, the other nations of whom I have had occasion to speak, added nothing to the discoveries they had been long in possession of. I shall therefore attend only to such strokes as are capable of characterising the genius and taste which reigned in the enterprises, and in the monuments of the Assyrians, Babylonians, and Egyptians. Indeed the epocha which at present engages our attention, is that of the glory and splendor of these people. After the conquests of Cyrus, successively subjected to the Persians, Greeks, and Romans, they fell into absolute decay, and their genius seemed to be extinguished with their liberty.

The history of the arts among the Greeks in the space of time comprehended in this third part, does not present us with objects worthy of much attention. The progress of these people was, in every kind, much slower than those of the Egyptians and Asiatic nations. The ages we are now going through are not yet those which have immortalised Greece. But about 200 years after this epocha, the Greeks took the most sublime flights. They then enriched the arts with all that imagination and taste could furnish. They caught the real beauties which neither the Egyptians nor the

the Asiatics were ever acquainted with. We shall not however enjoy this magnificent spectacle; it would be necessary for that purpose to descend to the time of Pericles, or even of Alexander. The bounds I have prescribed myself will not permit it. Let us content ourselves with contemplating the dawn which ushered in so fine a day.

C H A P. I.

Of the Assyrians and Babylonians.

WE have seen in the first part of this work, that Nineveh owed its foundation to Assur, and Babylon to Nimrod ^a. I said there at the same time, that the opinion of those among the writers of antiquity who attributed to the ancient Ninus and Semiramis the superb works which have rendered these two cities so famous, was not to be depended upon ^b. In effect it appears to me improbable, that in the earliest times they should have executed such equally immense and magnificent structures as are spoke of by those authors. I judge them to belong only to the ages which employ us at present. This opinion moreover is strengthened by the suffrage of a number of historians, who in all respects deserve infinitely more credit than Ctesias copied by Diodorus and by other writers modern enough ^c.

Castor, whose chronology appears to have been greatly esteemed by Eusebius and many other writers of merit, reckoned two kings of Assyria of the name of Ninus; one who founded Nineveh, and another who mounted the throne in the latter times of that empire ^d. Every thing leads me to believe that we ought to refer to the second Ninus the enlargement and magnificence of Nineveh, improperly attributed by Ctesias and his copiers to the first Ninus, the founder of the Assyrian empire.

^a Book i. c. i. art. 3. ^b Ibid. b. 2. c. 3. ^c See Marsham, p. 477.

^d *Apud* Syncell. p. 205. 206. A

As to Babylon, it is beyond a doubt that we ought to place the construction of all the works which have immortalised that capital, under the reign of its last sovereigns. Berofus^e, Megasthenes^f, Herodotus^g, and Abydenus^h, ascribe the honour of all the embellishments of Babylon to Nebuchadnezzar, and to Nitocris his spouse. Their testimony is conformable to that of the holy scriptureⁱ. I believe myself therefore sufficiently authorised to refer to the ages treated of in this third part, all that the ancients have delivered to us upon the grandeur and magnificence of Nineveh and Babylon.

Here no doubt is the place to make a particular description of these two cities. But, in the first place, we have left us but very imperfect notions of Nineveh. Of all the writers of antiquity who have reached down to us, not one had seen that capital. It had been destroyed, and that a long time, when Herodotus the most ancient of those authors wrote. As to Babylon, the subject has been treated so often and in so many works which are in the hands of all the world, that I deem it superfluous to enlarge upon it. I shall therefore content myself with proposing some general reflections upon these two cities.

The circumference of Nineveh and of Babylon, if we take it upon the common opinion, was of a prodigious and incredible extent. The first of these two cities formed, according to the ancients, an oblong square, the two greater sides of which were each of 150 stadia, and the two lesser of 90. Its total circuit was consequently 480 stadia^k. We commonly estimate these 480 stadia at 25, or even 30 of our common French leagues. But according to the opinion of Monsieur de L'Isle, founded upon good authorities, the stadia of remote antiquity should be estimated much lower. According then to the reduction which I propose, the

^e *Apud* Jos. advers. Appion. l. 1. c. 6.

^f *Apud* Euseb. praep. evang. l. 9. c. 41. p. 457. B.

^g L. 1. n. 185.

^h *Apud* Euseb. loco citat. p. 456.

ⁱ Daniel, c. 4. v. 27.

^k Diod. l. 2. p. 115.

^l Acad. des sciences, ann. 1721, M. p. 60. 61.

ground-plan of Nineveh could occupy only about six square leagues ^m. That city must have been consequently something more than seven times greater than Paris ^{*}.

We read, it is true, in the prophet Jonah, that Nineveh was a great city of three days journey ⁿ. The greatest part of commentators have concluded from thence, that Nineveh could not be surrounded in less than three days. That expression appears to me rather to signify that three days at least were necessary to travel into every part of it. The explication that I propose, appears to me exactly conformable to the mission of the prophet. He had in effect been sent to Nineveh to preach repentance, and it was only by going through the interior parts of the city, that he could declare to its inhabitants the menaces of the Almighty. So the sacred text says that Jonah entered the city a day's journey, and cried ^o.

Nineveh moreover was not peopled in proportion to the extent of its walls. We read in the same prophet I have just now quoted, that there were then in that city six score thousand persons that could not discern between their right hand and their left ^p; an expression which is understood, and rightly too, to mean children of the lowest age. It is to be presumed from this passage, that there could not be in Nineveh more than seven hundred thousand souls or thereabouts, the children commonly making but the fifth part of the inhabitants of a city. Nineveh then contained not many more people than Paris, although its compass was infinitely greater. Undoubtedly that city inclosed many very spacious gardens; a custom established from the earliest times, and which still continues in the eastern cities ^q.

I shall say the same thing of Babylon, and on a much better foundation; for the ancients speak in reality of gardens,

^m Ibid. ann. 1725, p. 54. To speak more exactly $5\frac{915825}{1234321}$ square leagues.

^{*} The surface of Paris is $\frac{11389825}{14470410}$ parts of a square league. Thus the surface of Nineveh was more than seven times $7\frac{3}{10}$ greater than that of Paris.

ⁿ C. 3. v. 3.

^o C. 3. v. 4. See Father Hardouin *ad* Plin. l. 6. sect. 16. not. (25.)

^p C. 4. v. 11. ^q Acad. des sciences, ann. 1725, M. p. 51. 55.

and

and even of arable lands being inclosed within its walls. But otherwise they are by no means agreed upon the extent of that city. I thought the preference due to the measures of Herodotus, whose testimony is much superior to that of all the other writers. He had been at Babylon at a time when that city was not entirely fallen from its ancient splendor; an advantage which Clitarchus, Diodorus, Strabo, and the rest could not have had. According then to Herodotus, the compass of Babylon was equal to that of Nineveh, that is to say, 480 stadia ^r. But Babylon was a perfect square, and consequently greater than Nineveh ^{*}. According to the proportion that I have already indicated, we ought to estimate the ground-plan of Babylon at more than six square leagues of surface [†]. That city was therefore near eight times as big as Paris [‡]. We can say nothing of the number of the inhabitants it contained: only I presume, that Babylon might be peopled in the same proportion as Nineveh.

Authors have greatly extolled the public works and edifices which once rendered Babylon one of the wonders of the world. We may reduce all these objects to five principal heads: 1. the height of its walls, 2. the temple of Belus, 3. the hanging gardens, 4. the bridge built over the river Euphrates, and the quays which lined that river, 5. the lake and canals dug by the hand of man to distribute the waters of the Euphrates.

All these works so marvellous in the judgment of antiquity, appear to me to have been extremely exaggerated by the authors who have spoke of them. How can we conceive in effect, that the walls of Babylon could have been

^r Diod. l. 2. p. 121; Q. Curt. l. 5. c. 1, [†] L. 1. n. 178.

^{*} Notwithstanding what Strabo says, l. 16. p. 1071. C.

[†] In strictness $6\frac{1}{2}\frac{5}{3}\frac{4}{4}\frac{0}{3}\frac{7}{2}\frac{4}{1}$ square leagues.

[‡] About $7\frac{4}{5}$. If we were to judge of the greatness and extent of Babylon from a fact related by Aristotle, what an idea should we form of it? He says, that when the city was taken, there was one quarter in it, where the news had not yet arrived three days after. De rep. l. 3. c. 3. t. 2. p. 340. 341. I do not conceive how an author like Aristotle could seriously relate such an absurdity.

318 feet high, and 81 in thickness, in a compass of near ten leagues †.

I shall say the same of that square building, known under the name of *the temple of Belus*. It was composed of eight towers placed one above another, diminishing always as they went up. Herodotus does not tell us what was the height of this monument †. Diodorus says that it surpassed all belief *. Strabo fixes it to one stadium †, a measure which answers nearly to six hundred of our feet *. For in the time of this geographer, the stadia were much more considerable than in the first ages †. The entire mass of this building ought to have been answerable to its excessive height; and this is also the idea that the ancients designed to give us of it. We may judge by the following fact. Xerxes had entirely demolished this temple. Alexander undertook to rebuild it. He designed to begin by clearing the place, and removing the ruins. Ten thousand workmen who were employed two months in this work, were not, say they, able to finish it †.

The riches inclosed in the temple of Belus were proportioned to its immensity. Without speaking of the tables and censers, the cups and other sacred vases, of massy gold, there was a statue 40 feet high; which alone weighed a thousand Babylonish talents. In short, according to the inventory that the ancients have given us of the riches contained in this temple, the total sum would amount to two hundred and twenty millions and a half of French livres. Exaggerations like these destroy themselves.

As to the hanging gardens, according to all appearance they never existed. The silence of Herodotus on a work so singular and so remarkable, determines me to place in

† Herod. l. 1. n. 178. Herodotus on this occasion could only speak from the accounts of the inhabitants. When he was at Babylon, the walls were more than three fourths destroyed, as he tells us himself, l. 3. n. 159.

† He only says that it was four stadia in compass, l. 1. n. 181.

* L. 2. p. 123. † L. 16. p. 1072.

* The towers of the church of Notre Dame are only 224 feet in height.

† We cannot reckon them less than 95 fathom 2 feet 11 inches.

‡ Strabo, l. 16. p. 1072.; Anian. de exped. Alex. l. 7. p. 482.

the rank of fables all that the other writers have delivered upon this pretended wonder. Herodotus had carefully visited Babylon. He enters into such details as prove that he has omitted none of the rarities of that city. Can we presume that he would have passed over in silence such a work as the hanging gardens? All the authors who have spoke of it are of much later date than this great historian. None of them except Berofus * speaks on his own testimony. It is always on the report of others. Diodorus had extracted from Ctesias what he says of these famous gardens. There is also great appearance, that Strabo had drawn from the same source. In a word, the manner in which Quintus Curtius expresses himself, sufficiently shews how much the existence of these gardens appeared to him suspicious. He judged they owed the greatest part of it to the imagination of the Greeks ^a.

Let us now speak of the bridge of Babylon, which the ancients have placed in the number of the most marvellous works of the east. It was near one hundred fathoms in length, and almost four in breadth ^b. We cannot deny but that a great deal of art and labour was necessary to lay the foundations, which it could not be easy to settle in the bed of an extremely deep and rapid river, which also rolls along a prodigious quantity of mud, and whose bottom is entirely sandy. They had therefore taken many precau-

* We know that Berofus never stuck at exaggerating when he had a mind to exalt the wonders of his country.

^a *Super arce vulgatum Graecorum fabulis miraculum pensiles horti sunt*, l. 5. c. 1. p. 314. There was probably at Babylon some hill lined with terrasses, and adorned with trees. This kind of garden may have been enough for a heated imagination to give birth to the descriptions which we read at this time in certain authors.

^b Diod. l. 2. p. 121. According to that author, the bridge of Babylon was 5 stadia in length and 30 feet in breadth. Reducing these dimensions to our measures, this bridge may have been 477 fathom 2 feet 7 inches long. This length, as we see, is in no sort of proportion to the breadth. Besides, Diodorus says, that the bridge was built in the narrowest place of the Euphrates. We learn from Strabo, l. 16. p. 1073. A. that at Babylon this river was only one stadium in breadth. I have thought fit in consequence to abandon the text of Diodorus, and fix the length of the bridge at one stadium.

tions to secure the piers of the bridge of Babylon. They were built of stones joined and fastened together with cramps of iron, and their joints filled with melted lead^c. The front of the piers, turned towards the current of the Euphrates, was defended by buttresses extremely advanced, which diminished the weight and force of the water, by cutting it at a great distance^d. Such was the bridge of Babylon.

While we do justice to the skill of the Babylonians, in conducting these works, we cannot help remarking the bad taste, which, at all times, reigned in the works of the eastern nations. The bridge of Babylon furnishes a striking instance of it. This edifice was absolutely without grace, or any air of majesty. The breadth of it was in no sort of proportion to its length^e. The distance between the piers was also very ill contrived. They were distant from each other only eleven feet and a half^f. Finally, this bridge was not arched^g. We may judge of its effect on the view.

The Babylonians, however, were not the only people who were ignorant of the art of turning an arch. This secret, as far as I can find, was unknown to all the people of remote antiquity, who, generally speaking, do not appear to have been very skilful in stone-cutting.

As for the quays which lined the Euphrates, we may believe that they were grand and magnificent; but I shall not easily believe that they surpassed those which we have daily under our eyes. In this respect, I believe, Paris may dispute it for magnificence, and for the extent of the work with all the cities of the universe.

I shall speak more particularly in the following book of the canals, and of the lake, for the discharge and passage

^c Herod. l. i. n. 186.

^d Diod. *ibid.*

^e Following the same reduction that we have proposed, this bridge was 95 fathom 2 feet 11 inches in length, and 4 fathom 2 feet 7 inches in breadth. The length of the Pont Royal is only 72 fathom; yet its breadth is 8 fathom 4 feet[†].

^f Diod. l. i. p. 121.

^g Herod. l. i. n. 186.; Diod. *loco citato.*

[†] The extent of Westminster bridge is 1223 feet from wharf to wharf, and its breadth within the battlements 44 feet.

of the waters of the Euphrates. We shall see there whether there is not a good deal of abatement to be made in the account of the ancients, when they make the circumference of the lake of Babylon amount to 1200 square stadia; that is to say, to more than fifty leagues *, and the depth of it to about 120 feet ^b; adding, that this lake was lined with stones throughout ⁱ.

I do not, however, pretend by these reflections to extenuate altogether the grandeur and magnificence of Nineveh and of Babylon. I only think we should make a considerable allowance for exaggeration, in what the ancients have delivered to us concerning them. I think, moreover, that the Assyrians and Babylonians had no idea of what we call the orders of architecture. I judge so from the little taste which the Asiatics in all ages discovered in their buildings [†]. I believe then that the monuments which formerly rendered Nineveh and Babylon so famous, were more remarkable for their singularity, and for the profusion of ornament, than by the symmetry and grace of their construction. That elegance, and those beautiful proportions which charm and allure us in the Grecian architecture, were, and still are, unknown in the Indies, in China, in Persia, and, generally speaking, in all the east.

We can speak but very imperfectly of the taste of the Assyrians and Babylonians in sculpture; only we see that this art must have been very much practised among these people. The scripture speaks of a golden statue sixty cubits in height, and six in breadth, set up by the orders of Nebuchadnezzar ^k, without reckoning many other representations of divinities and princes which filled the temples

^g Megasthen. apud Euseb. praep. evang. l. 9. c. 41. p. 457. C.; Diod. l. 2. p. 122.

* 50 leagues $\frac{3475}{17178}$.

^b Megasthen. *loco cit.* These 120 feet make 114 feet 7 inches, Paris measure. Diod. *loco cit.* makes the lake of Babylon only 35 feet in depth. It is still a great deal.

ⁱ Herod. l. 1. n. 185. Diod. l. 2. p. 122. say, that it was lined with a wall of bricks cemented with bitumen.

[†] From this proposition we must except the Greeks of Asia Minor.

^k Dan. c. 3. v. 1.

and palaces of Babylon¹. It is certain then, that the Babylonians worked much in sculpture; but is it certain also, that taste and correctness distinguished the works of their artists? This may very reasonably be doubted. In effect, we do not see that the Asiatics ever knew how to design with taste and precision. I judge so, not only by the modern productions of these nations, but even by such of their monuments as have escaped the injuries of time. The figures which we see on all that remains of the bas reliefs of the ancient orientals, are clumsy and incorrect, without attitude, grace, or variety of expression. We shall conceive still a worse opinion of the artists of Babylon, if we admit that the ruins, now known under the name of *the ruins of Persepolis*, are the remains of a palace built by the first sovereigns of Persia. The statues and bas reliefs which are yet to be seen there, are assuredly of the worst taste and the meanest execution^m; yet it appears that these works, as indifferent as they are, would have been above the hands of the ancient sculptors of Babylon. I say it on the authority of Diodorus, who tells us, that the palaces of Persepolis and Susa were built by artists whom Cambyfes transported out of Egypt into Persia, after he had subjected that empireⁿ. Nevertheless, when Cambyfes made himself master of Egypt, he was already so of Babylon, and consequently had it easily in his power to have taken thence whatever workmen he should have believed capable of executing the magnificent works he had resolved to erect. If this prince then thought it necessary to transport Egyptian artists into Persia, I think we may fairly conclude that he esteemed those of Babylon incapable of fulfilling the grand and magnificent projects he had conceived. For what other motive could have engaged him to such a step? With equal talents their being at hand should have determined Cambyfes to prefer the Babylonian workmen. In the following article, I shall again have occasion to return to the manner

¹ Dan. c. 5. v. 4.; Diod. l. 2. p. 122. 123.

^m See Chardin, t. 2. p. 147. &c.; Le Bruyn, t. 2. p. 284.

ⁿ L. 1. p. 55. & 56.

and character of these people in works of taste and genius.

Let us otherwise do justice to the Babylonians on their proficiency in many branches of the arts which they appear to have very well understood. In the number of these I shall place, for example, the foundery of metals. The great quantity of statues of gold, silver, and bronze, which decorated the temples of Babylon*, prove it sufficiently. I might also enlarge upon the skill of the Babylonians in the manufactures of the loom, and particularly in works of embroidery; but I reserve these details for the article in which I shall treat of the manners and customs of these people. What I shall there have occasion to say of their luxury and magnificence, will not permit us to doubt of that degree of perfection to which the Babylonians had carried a great part of the arts in the brilliant ages of their monarchy.

I should have spoken of the temple of Solomon, and of all the equally curious and magnificent works which we know to have been executed by the orders of this prince. But the history and the monuments of the Jewish nation do not enter into the plan which I have proposed. I have never treated of them otherwise than incidentally, and when it was necessary to have recourse to them to clear up and ascertain the state of the arts in Asia and Egypt, in the ages which formed the object of the first and second parts of this work. The epocha which we are now going through, dispenses with our borrowing any thing from the history of the chosen people. We shall find enough of resources in profane writers to establish the facts of which I am to give an account in this third part.

* Dan. c. 5. v. 4.; Herod. l. 1. n. 181.; Diod. l. 2. p. 122. 123.

C H A P. II.

Of the Egyptians.

I Have said, that, according to all appearances, we ought to abate a great deal of the idea which the ancients have designed to give us of the monuments constructed by the Assyrians and Babylonians. We have the better authority for this, as nothing remains at this time capable of justifying the marvels that antiquity published of Nineveh and Babylon. Thus we are not obliged to admit relations often repugnant to reason. We ought not to pass absolutely the same judgment of the facts which ancient authors have transmitted to us upon the monuments of the Egyptians. I shall observe at first sight, that the writers of antiquity do not appear to have given into the same exaggerations upon the Egyptian edifices as upon those of Asia. Besides, the obelisks and pyramids subsist to this day, without speaking of an infinity of other monuments, whose ruins alone may enable us to judge of the grandeur and magnificence which reigned in the enterprises of the Egyptians. What we have under our eyes, confirms almost all that ancient authors have been able to say upon this subject. Thus we are able to determine what credit is due to their testimony, and to judge of the facts they lay before us.

I have spoke, in the second part of this work, of the city of Thebes, of the obelisks, and of all the other monuments whose construction I thought belonged to the ages which then employed us. As for the pyramids, the writers of antiquity agree neither on the time nor the authors of these singular works. They are commonly placed in the number of the most ancient monuments of Egypt. Nevertheless, I believe this may be doubted. Homer, who makes frequent mention of Egypt, who relates many singularities of this country, who speaks of Thebes and of its hundred gates, says nothing of the pyramids.

This

This silence leads me to believe, that these extraordinary monuments did not exist, or at least were but just finished in his time. I presume, in consequence, that they could have been erected only in the ages which employ us at present, perhaps half a century before or after Homer *.

I think it unnecessary to dwell upon a long description of the pyramids. We know that the largest of the three which are some leagues distant from Cairo, forms a square each side of whose base is 660 feet. Its circumference of consequence is 2640 feet. It has near 500 feet of perpendicular height. Its summit is terminated by a platform, each side of which may be 16 or 17 feet. The solid contents of the pyramid is 313,590 cubic fathoms †. This amazing mass is composed of stones of an extraordinary size. There are many of them 30 feet long, by 4 in height, and 3 in breadth ‡.

Herodotus relates, that a hundred thousand workmen were employed at the same time in the construction of this pyramid †. They were relieved by an equal number every three months. Ten whole years were employed in hewing and conveying the stones †. Twenty more were necessary to

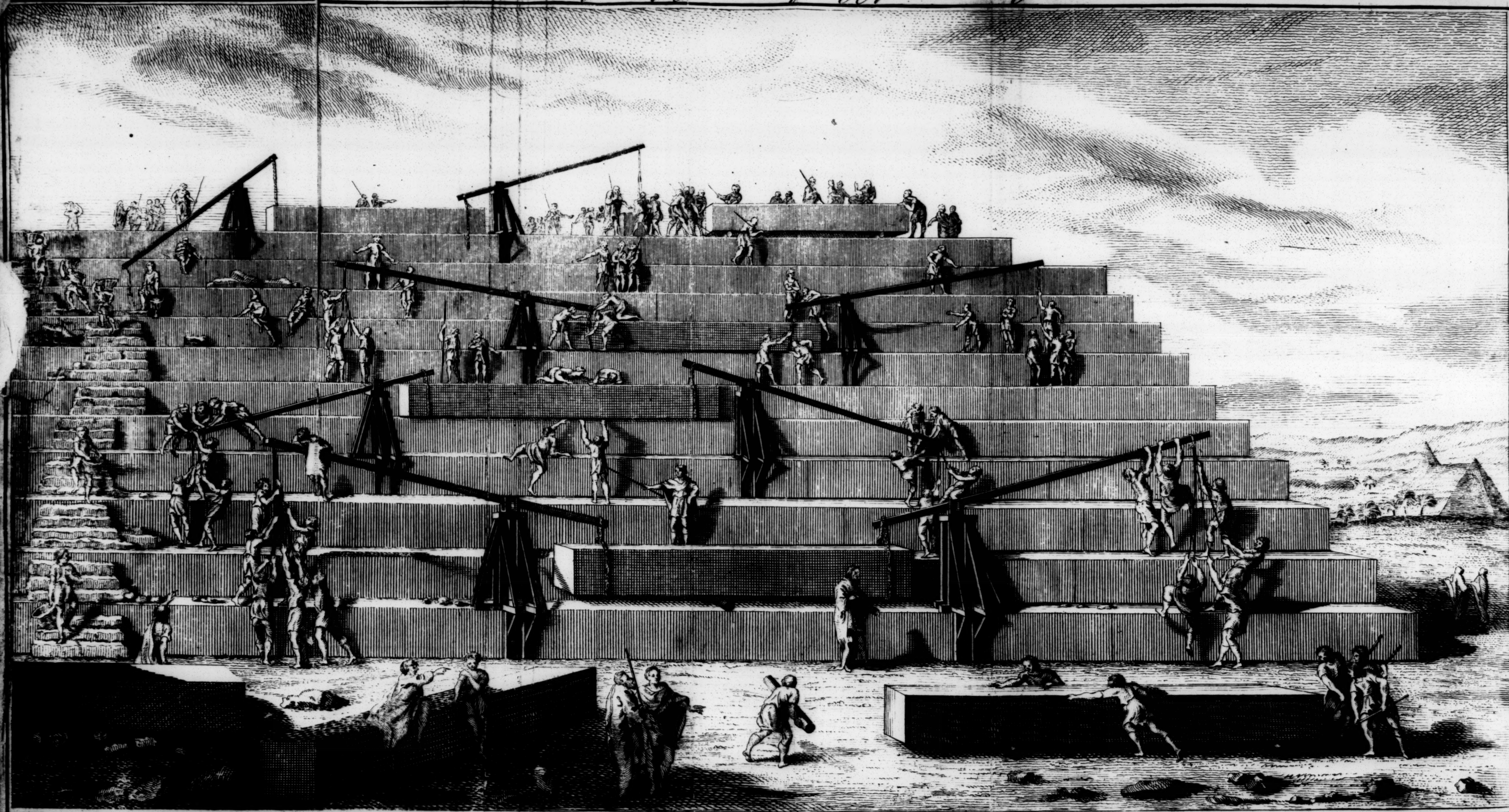
* It appears pretty certain that this poet lived something more than 900 years before J. C. The date I assign the pyramids, agrees perfectly with that given them by Diodorus, l. 1. p. 72.

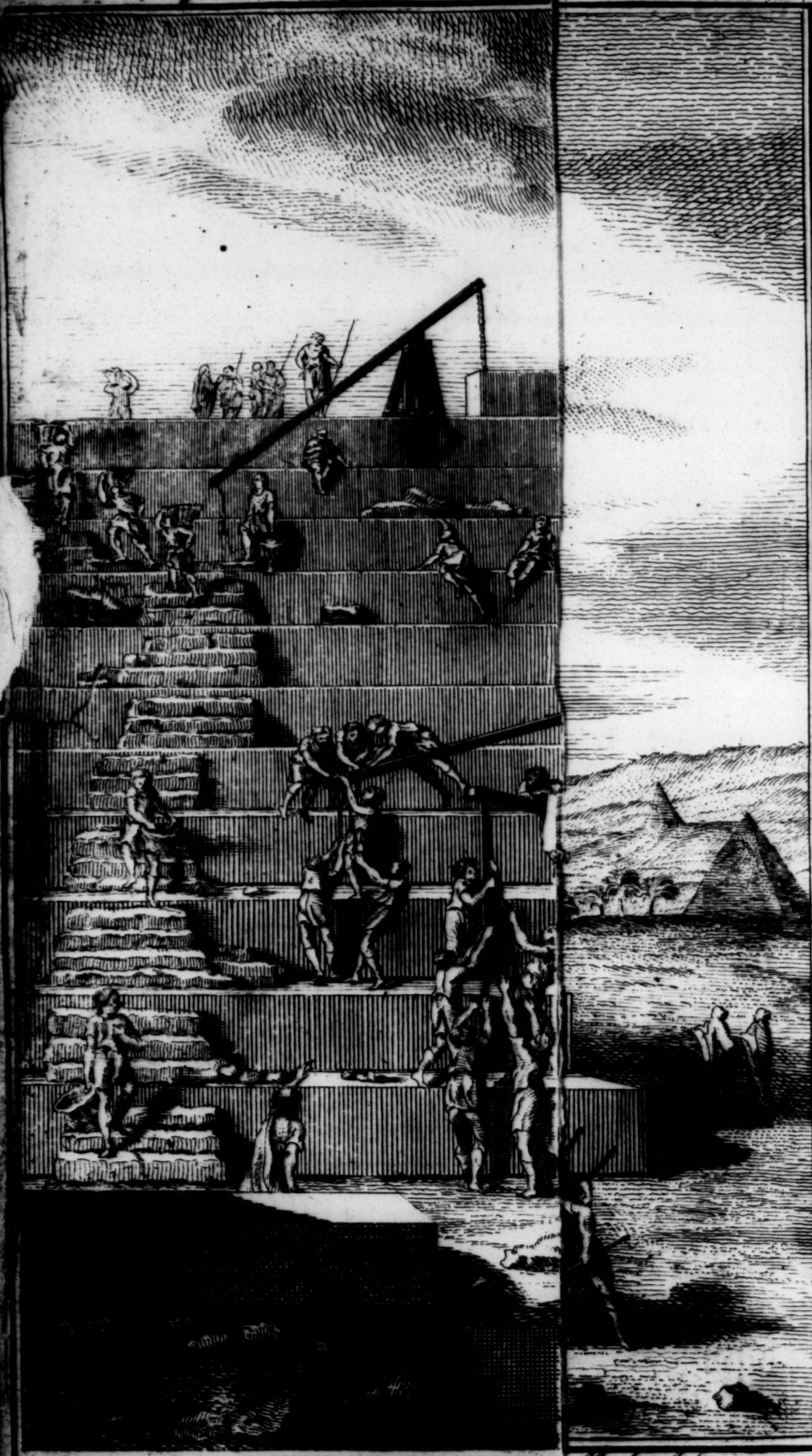
† Reg. scient. acad. hist. autore J. B. Duhamel, p. 428. ; Sicard. mem. des mss. du Levant, t. 7. p. 170. 171.

‡ Herod. l. 2. n. 124. ; Pietro d'ella Valle, let. 11. t. 1. p. 224. 225. ; Maillet, descript. de l'Egypte, p. 224. 230. 231. 253.

§ L. 1. n. 124. ; Diod. l. 1. p. 73. and Plin. l. 36. sect. 17. say three hundred and sixty thousand.

† Herod. l. 2. n. 124. ; Diod. l. 1. p. 72. ; Plin. l. 36. sect. 17. p. 738. say that the stones employed in building the pyramid were brought from Æthiopia, and from Arabia. This fact does not appear to me to be well established. In the first place, it is not likely that the kings of Egypt having excellent materials at hand, should have unnecessarily expended immense sums to bring them from afar. Again, the stones of the pyramid have too near a resemblance to those which are found in the neighbourhood, for us to imagine that they were not taken thence. Thevenot, t. 2. p. 484. and Vansleb. relat. d'Egypte, p. 138. I should only think that they may have brought the marble which covered the pyramids on the outside from the neighbourhood of the Red sea, and from the Upper Egypt.





M. Sculp.

finish this enormous edifice ^t, which contained in its inside galleries, chambers, and a well. An inscription tells us how much it had cost for leeks, garlic, onions, and such like vegetables furnished to the workmen. This sum, say they, amounted to sixteen hundred talents of silver ^u, that is to say, to near seven millions of French money. This object was certainly the principal article of the expense. I do not think that the surplus can have been considerable, or I would rather say that the food of the workmen was all the expense of building the pyramids. In effect, I think I have good authority for maintaining, that all the ancient monuments of Egypt were built by arbitrary tasks ^x. The monarchs therefore who undertook the pyramids, were at no other expense than that of feeding the workmen employed in these immense labours.

I have said that the great pyramid was built almost throughout of stones of an enormous size. Our modern authors have reasoned much and formed many conjectures, to explain by what means the Egyptians could raise such enormous masses to the height we see them. These doubts have probably been occasioned by some writers of antiquity, who speak of that operation but in a very vague and uncertain manner. Diodorus says, that they accomplished the building of the pyramids by means of terraces disposed in an inclined plane ^y. He adds to this relation such circumstances as cannot fail to render it very suspicious to whosoever will reflect upon it. What we read in Pliny is subject to the same censure. This author seems to have copied Diodorus, not omitting however to diffuse his usual obscurity on what he borrows from the Greek historian ^z. Nevertheless it was very easy, by consulting Herodotus, to form a very simple and a very just idea of the manner in which the pyramids were constructed.

According to this great historian, the pyramids were formed by distinct courses of stones, which courses successively

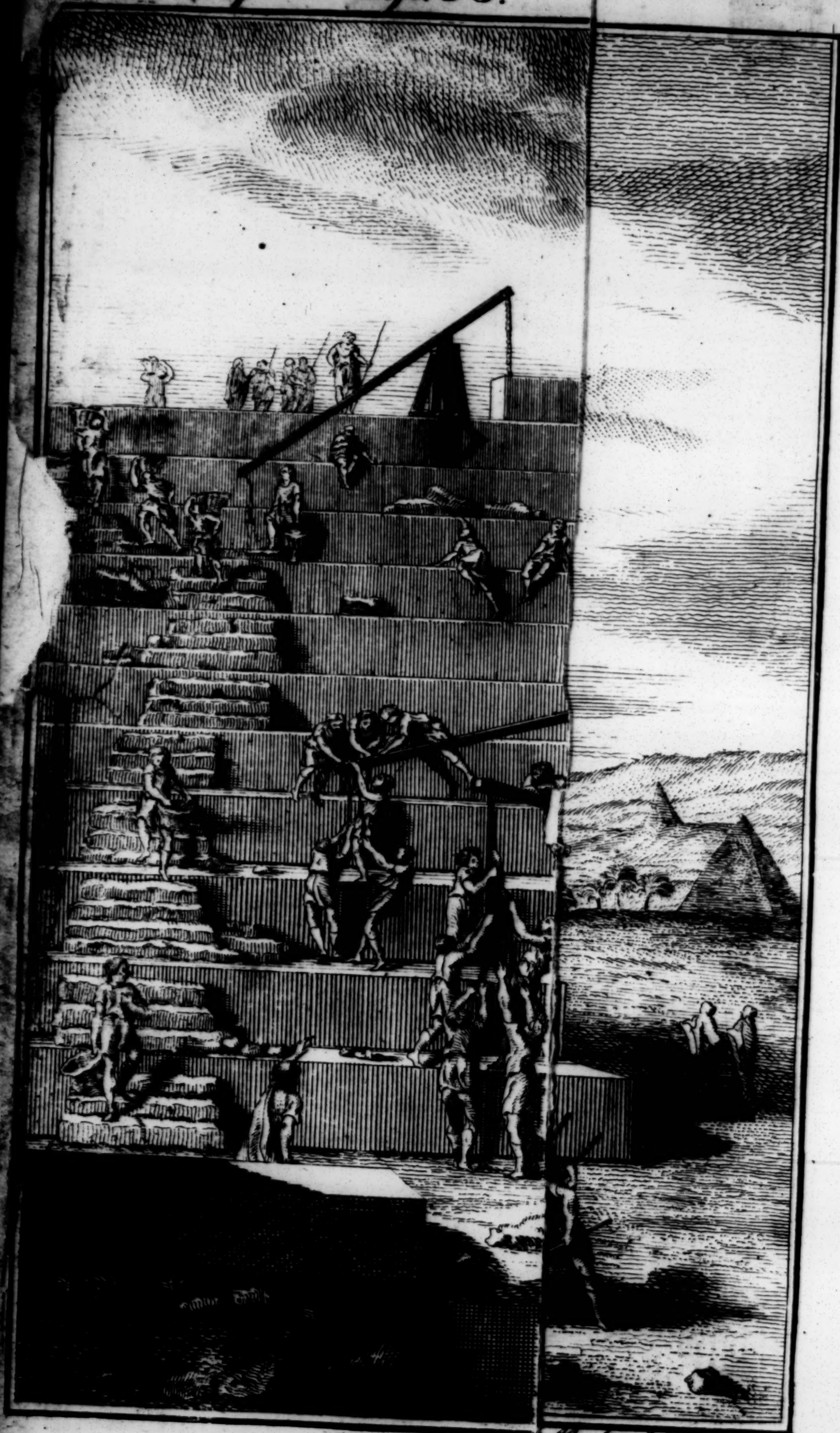
^t Herod. Diod. Plin. *locis cit.*

^u Herod. l. 2. n. 125.; Diod. l. 1. p. 73.; Plin. l. 36. sect. 17. p. 738.

^x See Arist. de rep. l. 5. c. 11. t. 2. p. 407. E.; Diod. l. 1. p. 73. & 74.

^y L. 1. p. 73.

^z See l. 36. sect. 17.



W. Sculp.

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‡ Herod. l. 2. n. 125.; Diod. l. 1. p. 73.; Plin. l. 36. sect. 17. p. 738.

* See Arist. de rep. l. 5. c. 11. t. 2. p. 407. E.; Diod. l. 1. p. 73. & 74.

† L. 1. p. 73.

‡ See l. 36. sect. 17.

diminished in size, as the proportions of the edifices required it. Every course was so much within that immediately below it, as to make each front of the pyramid form a sort of stair. The relations of modern travellers agree perfectly with this. It is even yet easy at present to count the number of courses which form the great pyramid^a. This fact being admitted, we see that only time and patience were necessary to raise the heaviest stones to any height whatever. A very simple machine, and according to Herodotus very easy to manage, placed upon the first course, served to raise the stones destined for the construction of the second. The second being finished, another machine of the same I have been speaking of was fixed upon it, and so on for the rest^b; one or more of the machines being always left upon each of the courses already laid, to serve successively for raising the stones from step to step^{*}. By repeating this operation as often as was necessary to form the height of the pyramid, they accomplished the raising the stones with ease to its utmost summit. Such, by the report of Herodotus, was the manner that the body of this monstrous edifice was constructed.

The same author teaches us also the way they fell upon for the exterior covering of the pyramid; for it is certain that they had all originally an outward coat, whether of square flags, of marble, or of bricks, or of small stones, in such a manner that they presented to the eye only a perfectly even slope, such as we see at present in most of these buildings^c. It is true, that at this time the great pyramid presents us on each of its sides only a kind of stair; but it is easy to con-

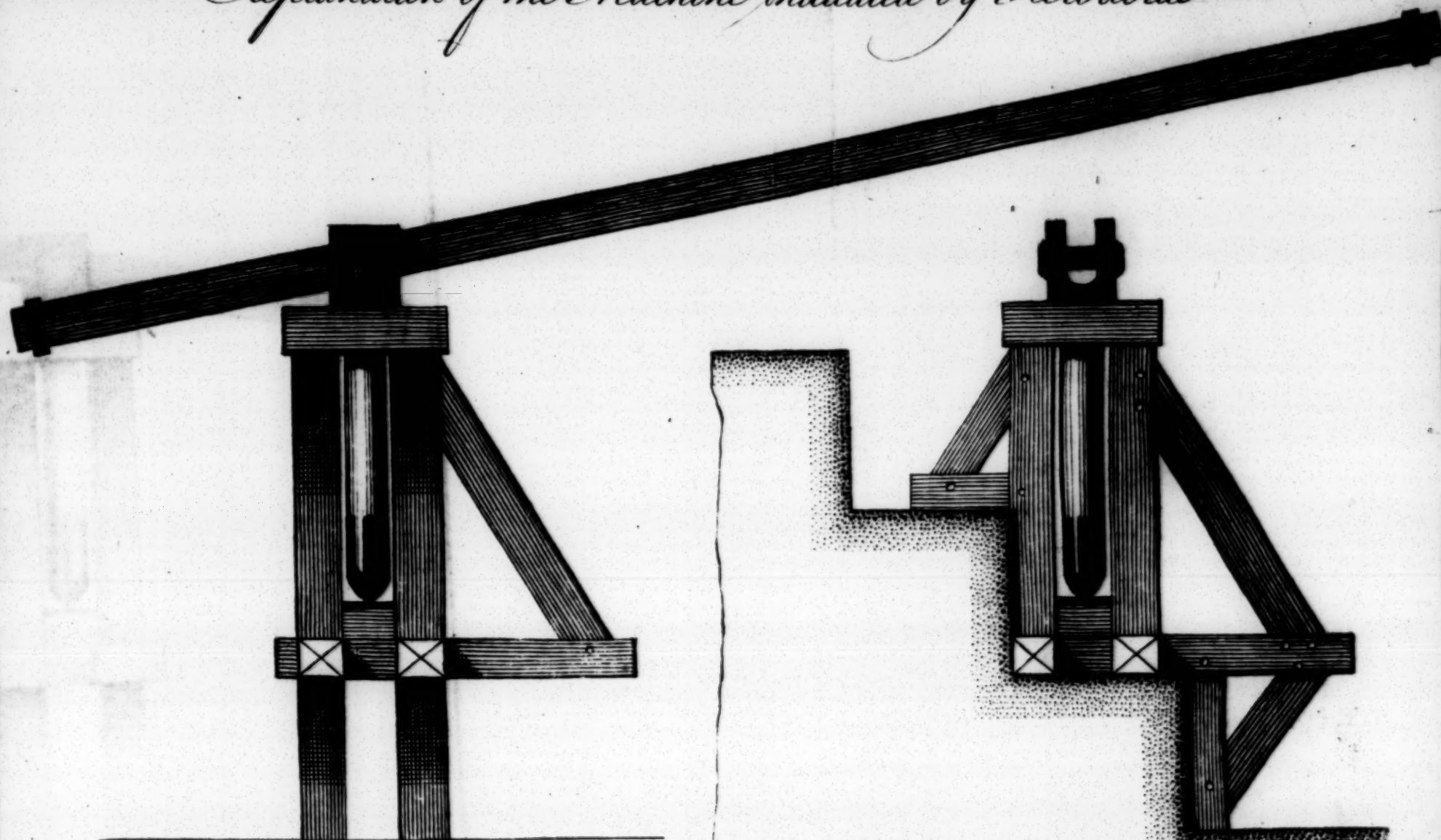
^a See Greaves pyramidograph. p. 11.; Thevenot, t. 2. p. 412. 413.; Van-
sleb. relat. de l'Egypte, p. 140.; P. Lucas, voyage du Levant, t. 1. p. 45.

^b Herod. l. 2. n. 125.

^{*} Herodotus gives us alike to understand, that the same machine served for the whole building, and that the management of it consisted in transporting that machine upon all the courses of the pyramid successively. But I have thought proper to prefer the operation that I have indicated. It is both more natural and of quicker dispatch.

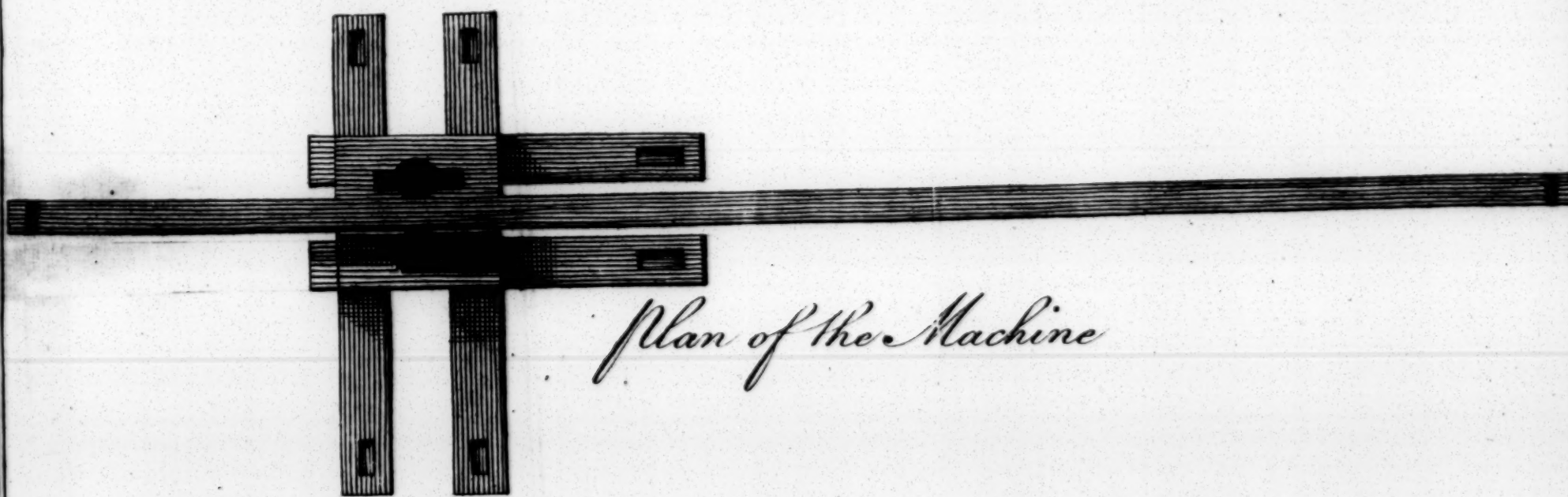
^c Greaves, pyram. p. 20. 22.; Thevenot, t. 2. p. 411.; P. Lucas, t. 1. p. 46.

Explanation of the Machine indicated by Herodotus



Elevation of the Machine

Profile of the Machine

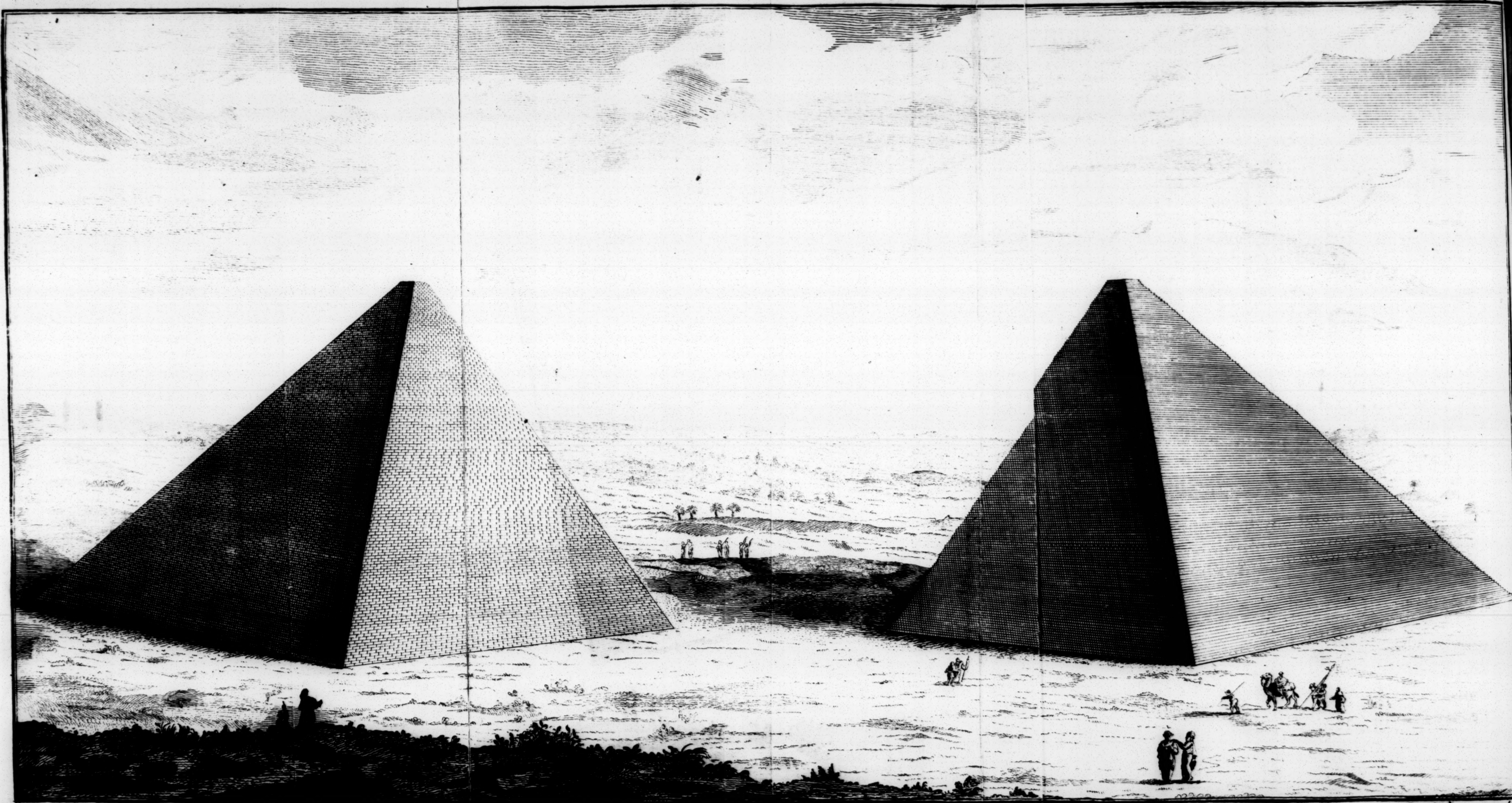


Plan of the Machine

Scale of 1 2 3 Fathoms

A. Bell Sculp.

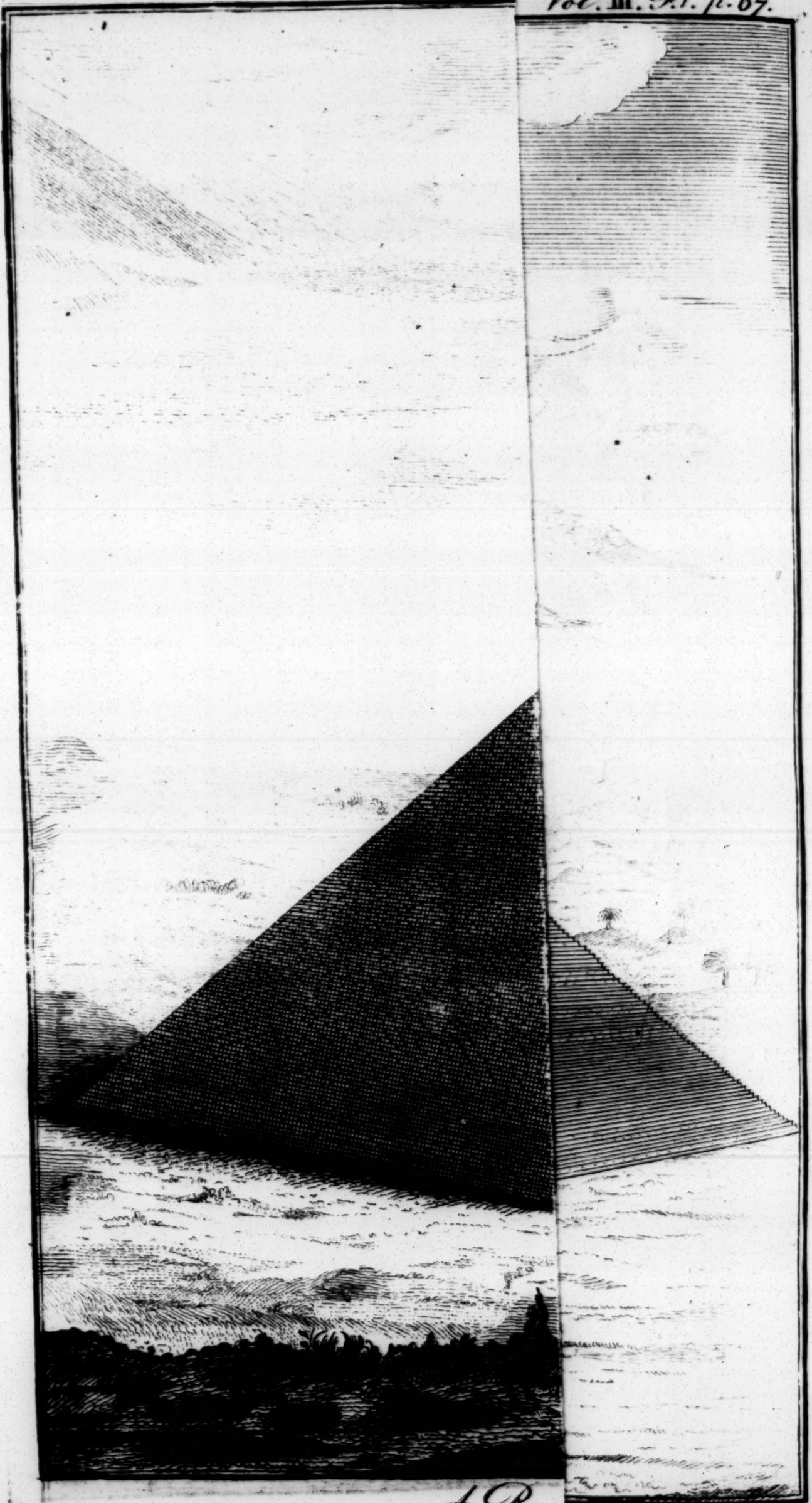




A. Pyramid Coated.

A. Pyramid without the Coating.

J. Phinn sculp.



A. Pyre T. Phinn sculp.

vince ourselves, that this enormous mass was originally overcast with marble, which has disappeared through the injuries of time, or rather by the avidity of the Arabs ^a. Herodotus tells us then what good sense alone would have dictated; that is to say, that they began the coating of the pyramids from the summit ^c.

Under many of these edifices they had contrived subterraneous passages which it is now impossible to penetrate. The ancients have left us no particular description of them. A well which Pliny mentions ^f, and which we still see in our days ^g in the inside of the great pyramid, served probably for an entrance into these subterraneous places. Herodotus says, that they had brought thither the waters of the Nile by an aqueduct dug under the earth, and directed in such a manner, that the pyramid formed a sort of island ^h. Pliny gives us to understand the same thing ⁱ. These subterraneous works, supposing there is no exaggeration in the relation of the authors just quoted, were at least as considerable as the pyramids themselves. We must grant this, if we consider, that these edifices are near two leagues distant from the Nile, and are built upon a hill above an hundred feet higher than the level of that river ^k. We know, that all the pyramids except the great one are closed and inaccessible. Common opinion will now have it, that it has been open only since the conquest of Egypt by the Mahometans. It is certain nevertheless, that it was so in the time of Strabo. What he says of the inside of that building, and of the tomb which is found there ^l, is absolutely conformable to all the modern relations. Plutarch speaks also of the echoes produced there by the voice ^m; a circumstance related equally by our travellers ⁿ. It is pretty singular however,

^a Maillet, descript. de l'Egypte, p. 224. 227. 228. 253.; Sicard, mem. des missions du Levant, t. 2. p. 282.; Mem. de Trev. Août 1723, p. 4125.

^c L. 2. n. 125. ^f L. 36. sect. 17.

^g Thevenot, p. 420. 421.; Maillet, p. 249.; Greaves, pyram. p. 14.; Vansleb, p. 142. This well is only forty feet deep at the utmost.

^h L. 2. n. 124. ⁱ L. 36. sect. 17.

^k Greaves, pyram. p. 7.; Maillet, p. 220. ^l L. 1. p. 1161.

^m T. 2. p. 903. A.

ⁿ Greaves, pyram. p. 15.; P. Lucas, voyage du Levant, t. 1. p. 43.

that all the other authors of antiquity should have been silent upon this article, and that, in general, they should have left us no minute description of the different conduits, the several galleries and the chambers which we meet with in the inside of the great pyramid, no more than of the tomb placed in the highest apartment.

Scarce any of those who in our days have had occasion to speak of the pyramids, have failed to close the description with some strokes of a trite and trivial morality upon the motives and object of those singular monuments. I shall not take up time with refuting these vain declamations, repeated from one to another, and dictated by ignorance and want of judgment. A little more knowledge of the manner of thinking of the ancient Egyptians, with some critical examination, would have spared us all these servile repetitions of our modern writers, confined almost always in one and the same circle of ideas. Let us endeavour to leave it, and explain the reasons which may have determined the sovereigns of Egypt to raise edifices so singular as the pyramids are in all respects.

The Egyptians were persuaded, that death did not separate the soul from the body, but that it remained attached to it as long as it could continue entire^a. It is from this idea, that these people took so many precautions to preserve their carcases from corruption, and to secure them from all accidents which might occasion their destruction. Hence the cares they gave themselves and the expenses they underwent to embalm the dead, and deposite them in places covered from all insult. The principal attention of the Egyptians was turned to this object. Thus they regarded their palaces and houses as inns for but a transient abode, giving, by way of distinction, the name of eternal habitations to the tombs^b.

^a Serv. ad *Æneid.* l. 3. v. 67.

^b Diod. l. i. p. 60. 61.

We read in Herodotus, that Cambyfes King of Persia not having been able to vent his rage upon Amasis, the last of the sovereigns of Egypt, commanded the dead body of this prince to be untombed, and, as the height of ill-treatment, he caused it to be burnt. Herod. l. 3. n. 16.

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The situation of Egypt, exposed every year to the inundations of the Nile, obliged the Egyptians to take all sorts of precautions to prevent the quick destruction of their sepulchres. It was for this reason, that they placed them on rocky situations sufficiently elevated to be secure from the overflowings of the river. There they dug caverns in which the mummies were deposited. They afterwards employed all sorts of means to keep the knowledge of them a secret. The entrances of these tombs, made in the form of a square well, were so artfully covered, that they cannot at this day be discovered without great search and much attention^a.

These facts being established, and they are very certain, the construction of the pyramids becomes very easy and natural. The intention of the sovereigns who built them, was to employ all the means which human art could furnish to secure their dead bodies against all events, and in some sort to assure them of an eternal duration. In this view, they contrived to place them in edifices whose solidity should be proof against time and other injuries. The Egyptian architects chose for that effect the pyramidal form, better adapted by its structure than any other, to brave the injuries of time. In consequence of the same principles the foundations of these edifices were laid on rocks^r. Yet not satisfied with all these precautions, the kings of Egypt drained every source of genius and industry to hide and disguise the place where their dead bodies were deposited*. This project is absolutely visible in the construction of the inside of the great pyramid^r.

Let us join to these motives, the maxims of a barbarous and inhuman policy, which may also have contributed to the construction of these prodigious edifices, so common in ancient Egypt. We know what was formerly the fertility of that country, and the little time and care it cost to cultivate

^a Pietro della Valle, lett. II. t. I. p. 231.; Maillet, p. 276. 282.

^r Plin. l. 36. sect. 16. p. 737.; Maillet, descript. de l'Egypte, p. 219. 220.; Greaves, pyramidograph. p. 7. 21. 23. *apud* Thevenot, t. I.

* See Herod. l. 3. n. 16.; Diod. l. I. p. 57.

^c Pietro della Valle, lett. II. p. 225.; Maillet, p. 217. &c.

the grounds. That innumerable multitude of inhabitants which then peopled Egypt, enjoyed great abundance and much leisure. It is pretended, that under the reigns of several monarchs there had been many commotions and troubles occasioned by that idle and easy life *. In order to prevent all factions and cabals, some sovereigns thought proper to find full occupation for their subjects even in time of peace. In that view, they contrived the building of the pyramids; an enterprize which must necessarily occupy, and that for a long time, many thousands of men. This political reason has not escaped Aristotle †. It was even perceived by Pliny, who however neglected it to indulge his usual fondness for vain and frivolous declamations ‡.

I think then, that a double motive may be discovered in the construction of the pyramids: one dictated by care for the future, and the other by policy; but as much as the first of these motives may appear excusable, so much ought the other to appear odious and detestable. So we read in history, that the memory of the sovereigns who had enterprised these immense buildings was held in execration. They became, even in their lifetime, the objects of public hatred and detestation; and these monarchs were so terrified with the complaints and murmurs which they saw arise against them, that they could not enjoy the fruit of their enterprizes. They durst not cause themselves to be interred in the pyramids erected by their orders: apprehensive lest the enraged people should drag thence their carcases, and deprive them of sepulture, these wretched sovereigns were forced to recommend to their friends the care of depositing their bodies

* Diod. l. 1. p. 100.; Plut. t. 2. p. 380. A.

† De rep. l. 5. c. 11. t. 2. p. 407. E. * L. 36. sect. 16.

These are the terms in which he expresses himself, speaking of the pyramids. *Regum pecuniae otiosa ac stulta ostentatio, quippe cum faciendi eas causa a plerisque tradatur, ne pecuniam successoribus, aut aemulis insidiantibus praeberent, aut ne plebs esset otiosa.* These first words, *regum pecuniae otiosa ac stulta ostentatio*, have served for a text to all our modern writers. This thought has appeared to them so fine and so just, that they have emulously commented and paraphrased it, perpetually and servilely copying each other; as is their custom, in almost all that concerns remote antiquity.

in unknown and secret places ^v. Just punishment of those exorbitant tasks with which they had oppressed their subjects, and of the unheard-of labours they had exacted. Their very name has perished. The oblivion to which they were condemned ^z, is without doubt the cause of our uncertainty at this day of the times and authors of these famous monuments.

After the pyramids, we may place, upon the credit of ancient authors, the labyrinth of Egypt in the rank of the most considerable and singular works which have ever been imagined. There reigns a great diversity of opinions among the ancients upon the time to which that so boasted edifice ought to be referred. I shall follow the opinion of Herodotus, who appears to me to deserve the preference, as well for his antiquity, as by the exactness of his researches during his abode in Egypt. He places the construction of the labyrinth under the twelve kings who reigned at the same time for fifteen years ^a. That event happened about 600 years before J. C. Pomp. Mela differs also very little from the relation of Herodotus ^b. It is then after these two authors, that I am going to trace a succinct idea of the labyrinth of Egypt.

This edifice, according to Herodotus, who had visited it very exactly, surpassed every thing that this great historian could have conceived either of himself or from others. Under one and the same circuit of walls they had inclosed 3000 halls, twelve of which were of a particular form and beauty ^c. All these apartments communicated with each other, but by so many turns and windings, that without a good guide it was impossible to avoid wandering ^d. These 3000 halls or

^v Diod l. 1. p. 73. 74. ^z Herod. l. 2. n. 128.

^a L. 2. n. 148. ^b L. 1. c. 9.

This author attributes the construction of the labyrinth to Psammetichus, the last of these twelve kings. The silence of Homer on the labyrinth of Egypt serves further to confirm my opinion, and proves, that the construction of this monument was posterior to that great poet.

^c L. 2. n. 143.

P. Mela says twelve palaces, a term which expresses the greatness and magnificence of the twelve halls of Herodotus.

^d P. Mela *loco citat.*; Strabo, l. 17. p. 1165.; Plin. l. 36. sect. 18. p. 739.

chambers

chambers were moreover distributed in such a manner, that there were as many below ground as above. Herodotus assures us, that he visited all the apartments above ground; but for those that were subterraneous, they would not permit him to enter them from motives of superstition *. The whole building of the labyrinth, walls, and ceiling, were of white marble, and displayed a great profusion of sculpture †. Each of the twelve halls or galleries I have mentioned, were supported on columns of the same marble ‡. In fine, the labyrinth ended with a pyramid forty fathom high. Figures of animals were ingraved on it larger than the life §. There are now no remains of this so singular and so magnificent monument ¶.

I think I have delivered every thing of consequence transmitted to us by the ancients on the Egyptian monuments, and that, following the relation of modern travellers, I have given a sufficient idea of what now remains of them *. Let us now allow ourselves some reflections upon all these works. Let us examine the genius and taste which characterised the enterprises of the Egyptians.

We cannot deny but that some ideas of grandeur entered into the projects of these people. They aimed, if the expression may be allowed, to render their works immortal: this certainly is the end they appear to have proposed. They forgot nothing which they imagined could contribute to enable their monuments to brave the injuries of time. The Egyptians sought out all the arts which human power could furnish to give stability to their edifices. They are as solid as immense; and in all appearance no wood entered into their construction; at least, none is to be seen in what remains at this day of the Egyptian monuments either entire or in ruins †. They are even composed, for the most part, of astonishing blocks of stone, marble, or granite; and cer-

* L. 2. n. 148.

† Herod. *ibid.*‡ *Ibid.*§ *Ibid.*

¶ See voyage into Egypt by Granger, p. 150. 151. 153.

* See part 2. book 2. c. 3. art. 1.

† Voyage into Egypt by Granger, p. 152. 153.; Paul. Lucas, third voyage, t. 3. p. 286.

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tainly these people possessed an art of removing the most enormous masses with peculiar facility. This justice would be difficult to refuse them, when we consider the quantity of obelisks, colossuses, spires, and stones of prodigious bulk, which they raised to surprising heights *.

Such then, in general, is the character and reigning taste of the monuments of Egypt. Huge and amazing piles indeed they are, and which we cannot see without a certain awe; but in vain do we look for grace, elegance, or symmetry. When we examine what may yet be found of the temples, palaces, and other edifices raised by the ancient Egyptians, the whole convinces us, that these people had no rules of proportion, no fixed and settled plan for their buildings. They worked, so to speak, at random, and in a manner absolutely vague and destitute of principles.

The Egyptians solely occupied with heaping masses upon masses, and raising stones upon stones, knew nothing of the resources furnished by the arts of elegance. They sought not to please, but to astonish the eye of the spectator. Hence they were for ever ignorant of beautiful proportion or advantageous disposition. Their buildings are slovenly and disagreeable in the gross, and still worse in the detail. The Egyptian architects were absolutely ignorant of the art of decorating an edifice. They had no idea of a just and suitable union of sculpture and architecture, nor knew they how to distribute and place ornaments with propriety. They scattered them every where with profusion, and a false and childish glitter is the result of the whole. Ignorance and barbarity are visible in the whole œconomy of their edifices, even the most superb. Columns, capitals, in a taste the poorest, most sordid and shocking. Entablatures of stupifying clumsiness, ornaments of an execution

* Nevertheless we must agree, that in this respect the Peruvians surpassed the Egyptians. In the construction of their edifices they made use of stones of a still more astonishing bulk than those which form the pyramids and other monuments of Egypt. Yet the Peruvians had no knowledge of mechanics properly so called. All they did was by main strength and dint of numbers, and by means of terrasses disposed in the manner of inclined planes. Acosta, *hist. nat. des Ind. Occid.* l. 6. c. 14.; *Hist. des Incas*, t. 1. p. 60. 61. 264. 265. 268.; *Mem. de Trev.* February 1750. p. 269.; Bouguer, *voyage au Pérou*, p. 105.

and design insupportably ridiculous. Truth incessantly tortured through the whole *. These people, in fine, were entirely ignorant of the art of varying of figures. A monotony and uniformity as tiresome as shocking, reigns through all their compositions. No proportion moreover, no design, no meaning in the execution, all is equally spiritless and barbarous.

This estimate of the Egyptian architecture is besides perfectly conformable to the judgment passed upon it by Strabo. This famous geographer, who had travelled through Egypt, assures us, that the edifices raised by the ancient inhabitants of that country displayed neither design, nor genius, nor elegance^m. So we see, that their manner of building was followed neither by the Greeks, nor by the Romans. The Egyptian taste in architecture has visibly no manner of relation with that transmitted to us by Greece and Italyⁿ, which alone however deserves to be followed either for elegance, or even for solidity †.

Let us add, that the Egyptians appear to have been entirely ignorant of the art of throwing an arch. We find no appearance, no indication of it in what now remains of their ancient buildings. We do not even find that they knew the art of cutting arch-wise the blocks of stone which form the heads of their doors. They are all uniformly terminated by a lintel absolutely straight and even^o. It is the same thing with their roofs. I have said above, that, according to all appearance, the Egyptians admitted no wood in the construction of their buildings of consequence, such as temples, palaces &c. Large stones resting at each end upon the walls of the halls served for beams, and com-

* See Paul Lucas, third voyage, t. 3. p. 33.; Pococke, *descript. of the Levant*, t. 1.; Norden's travels into Egypt and Nubia, t. 2.

^m L. 17. p. 1159. B. See also the relation of Sayd, in the collection of Thevenot, t. 2. p. 4.

ⁿ Athen. l. 5. c. 9. p. 206.; P. Lucas, third voyage, t. 3. p. 17. 39. 264.; Sicard, *mém. des mœurs du Levant*, t. 2. p. 209.

† We may judge of the solidity which the Greeks and Romans knew how to give their buildings, by seeing after how many ages many edifices of Greece and Rome still brave the injuries of time.

^o See Pococke, *voyage to the Levant*, t. 1.; Norden, *travels into Egypt and Nubia*, t. 2.; and the other authors before cited.



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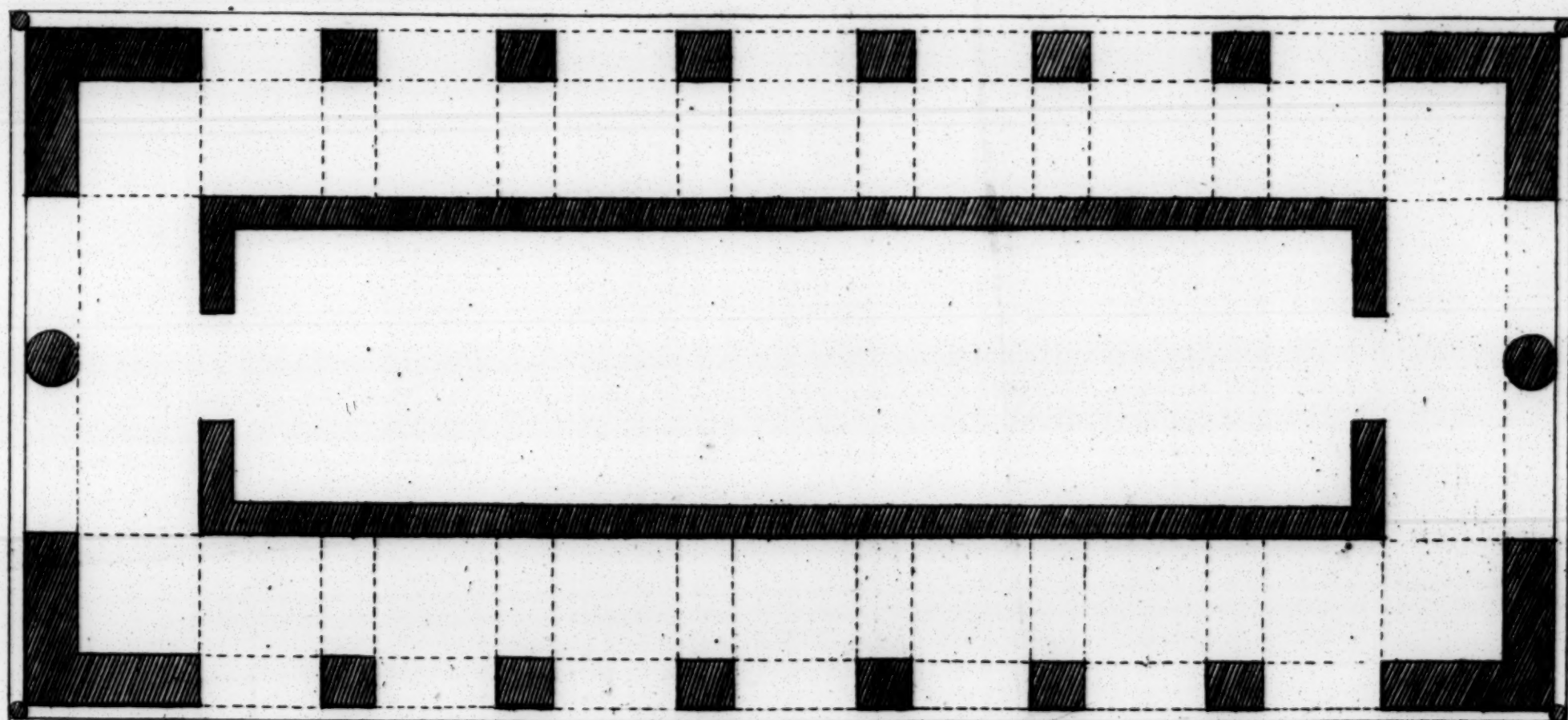
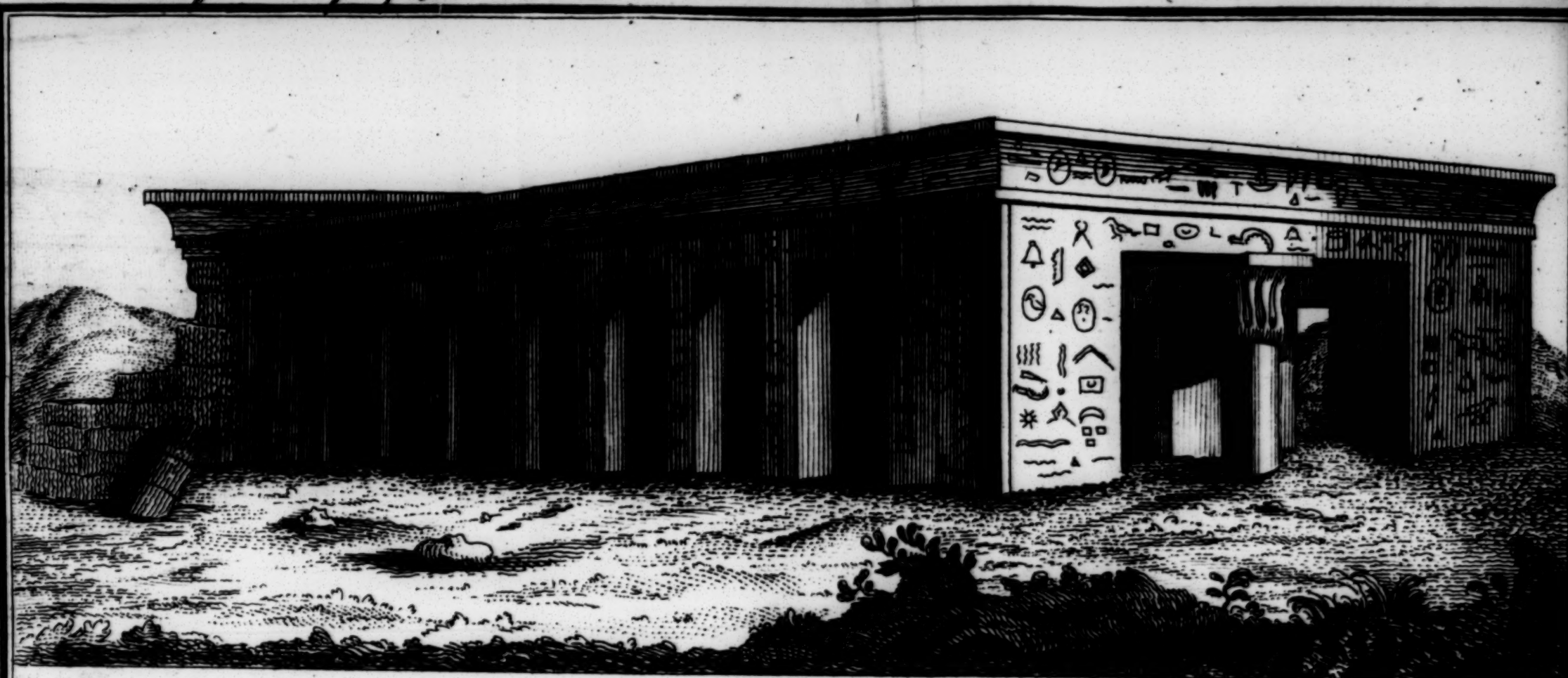
* See Paul Lucas, third voyage, t. 3. p. 33.; Pococke, descript. of the Levant, t. 1.; Norden's travels into Egypt and Nubia, t. 2.

^m L. 17. p. 1159. B. See also the relation of Sayd, in the collection of Thevenot, t. 2. p. 4.

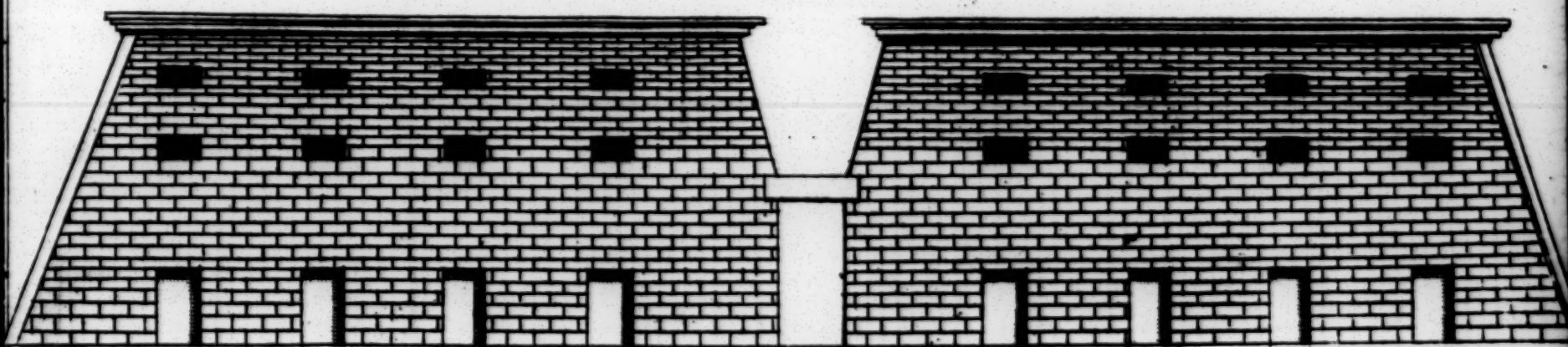
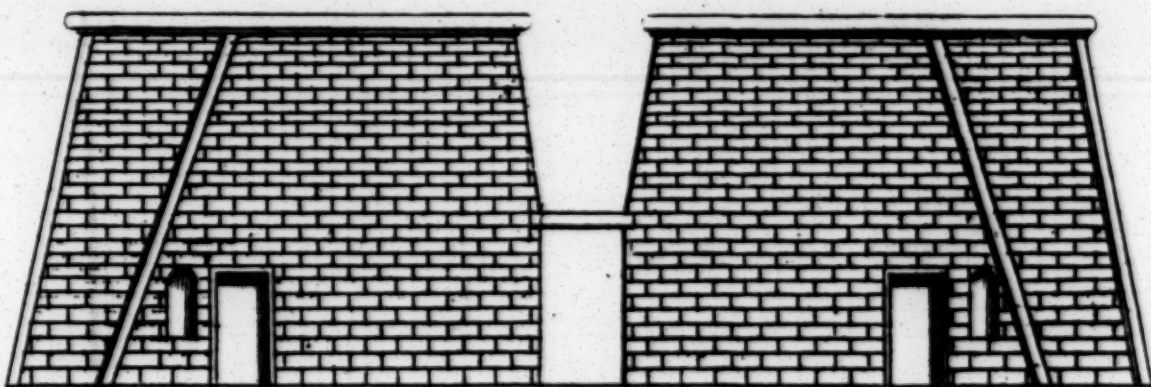
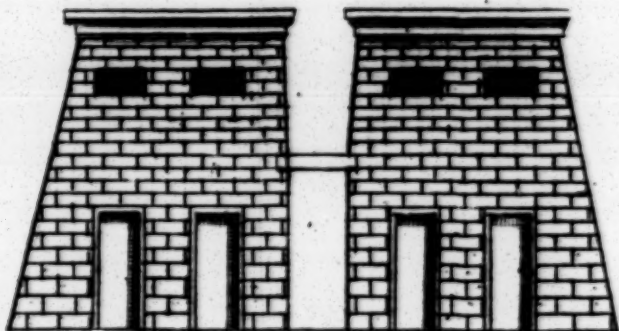
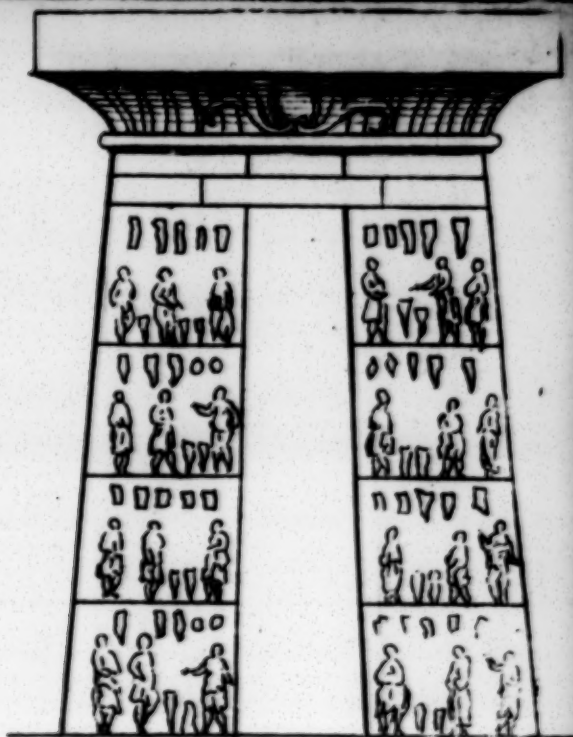
ⁿ Athen. l. 5. c. 9. p. 206.; P. Lucas, third voyage, t. 3. p. 17. 39. 264.; Sicard, mem. des mus. du Levant, t. 2. p. 209.

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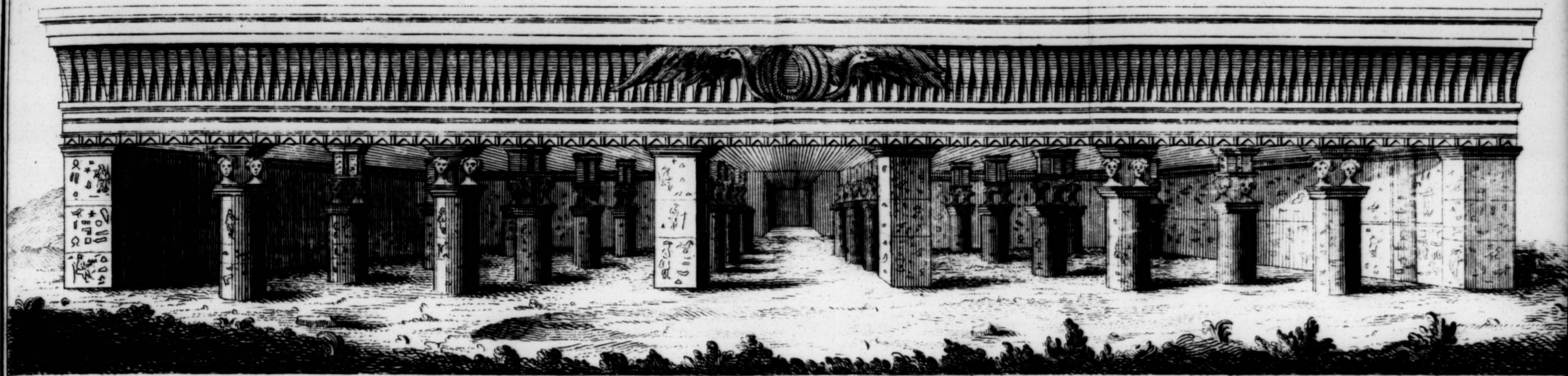
Monuments drawn from upper Egypt which proves that the Egyptians did not know the Art of making Vaults. And. Bell Sculp.



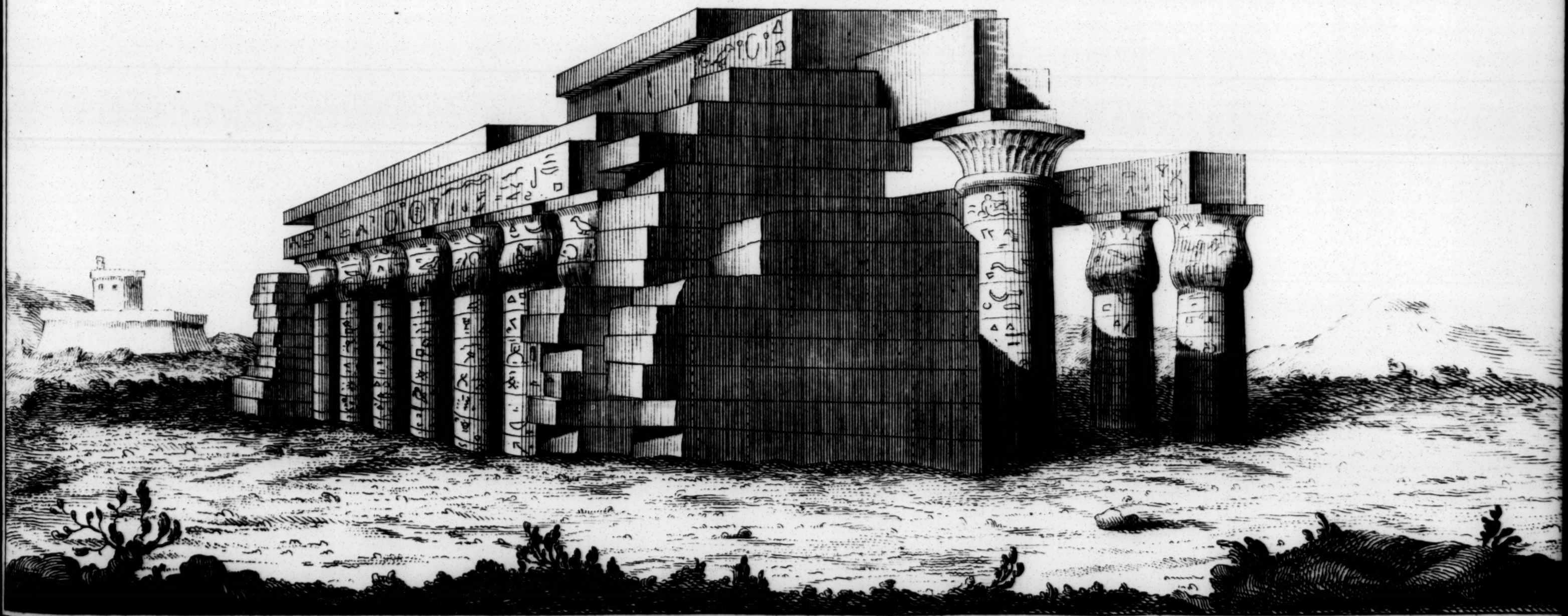
Scale of 5 10 Fathoms

Monuments of Upper Egypt which show that the Egyptians did not know the art of making bricks.





And. Bell. Sculp.



Monuments which prove that the Egyptians knew nothing of the Art of making Vaults or Arches.

17

posed the roofs ^p. But as in any considerable reach these stones might have given way, the Egyptians supported them by columns. And this we see was practised in all the grand edifices described by modern travellers ^q. Often even a single stone formed the roof of a hall ^r. As to the rest, we are not to believe that the desire of rendering their edifices more durable and solid, was the only reason which led the Egyptians to build them without wood. The nature of the climate they inhabited, undoubtedly contributed a great deal to it. Egypt produced no wood for building. Scarce do we find any for fuel ^s.

We shall not conceive a better idea of the progress of the Egyptians in the arts of taste and elegance, if we cast our eyes upon what yet remains of their ancient sculptures. Their statues and engravings display neither genius, nor talents, nor justness. They are equally awkward and incorrect. The figures in general are poor and flat, all of a size, without regard to perspective, lessening, stiff, without elegance or ingenuity, without study in the choice of the subject, without action, delicacy, or any sort of expression. The Egyptians, in a word, knew neither how to design simple figures nor to group their compositions. No meaning neither, nor variety in those hideous assemblages presented in their engravings ^{*}. Let us remark also, that their figures are always drawn in profile, and never in full or a fourth inclined. In effect, bodies seen under these aspects require too much address, and skillfulness especially, to have been successfully represented by the Egyptians. And yet the

^p See Greaves, pyramid. p. 16.; Thevenot, t. 2, p. 419.; P. Lucas, third voyage, t. 3. p. 38. 264. 265. 275.; Voyage to the Levant, t. 1. p. 42.

^q P. Lucas, third voyage, t. 3, p. 38.; Sicard mem. des miss. du Levant, t. 7. p. 160.; Granger, voyage into Egypt, p. 38. 47. 68. 69. 73.

^r Herod. l. 2. n. 155.; Diod. l. 1. p. 56.; Strabo, l. 17, p. 1165.

^s Pietro della Valle, lett. 11, p. 210. 218.; Granger, voyage into Egypt, p. 13.; Paul. Lucas, third voyage, t. 3. p. 211. 212.

^{*} See the figures engraved upon the obelisks, and upon all the other monuments truly Egyptian. I speak not here of the bas reliefs, for I have never seen any of them, and I even doubt whether the Egyptians were ever skilled in works of this kind.

heads, hands, and feet, for all the facility of executing them in profile, have in the Egyptian works neither motion nor expression.

We have already seen that it was the same thing in the ornamental part of their architecture. It is all heavily laboured, without taste and without precision. If the Greeks did learn from the Egyptians to handle the chisel, they found means to make a much better use of it. Their monuments are as valuable for their grace and variety, their fire, their spirit, and the truth which animates them, as those of the Egyptians are disgusting by their deformity and heaviness, their monotony and incorrectness. This contrast did not escape the discernment of the ancients. We see that they made little account of the sculpture of the Egyptians.

I have already spoken of the taste this people had for colossuses. We have seen, that, according to the relation of modern travellers, many of them still subsist at this day in different places of Higher Egypt^a, without reckoning the sphinx which is found at a little distance from the pyramids. We see little at present except the head of this figure, the rest being buried in the sand. This head is 35 feet round, and 26 high. They reckon 15 feet from the ear to the chin^b. It is easy from these dimensions to judge of the whole bulk of this enormous statue. When I am upon this subject, it may be expected I should say something of the manner the Egyptians went about in making their colossuses. A passage of Diodorus lets us into it.

This author says, that the Egyptian sculptors were ac-

^a Strabo, l. 17. p. 1159.; Paus. l. 7. c. 5.

^b See part 2. book 2. sect. 1. c. 5.

^c Maillet, p. 221.; Theven. t. 2. p. 426. Pliny, l. 36. sect. 17. exaggerates prodigiously the proportions of the sphinx in question: he says, that if we measure the circumference of the head by the forehead, we shall find it 102 feet in compass, and 143 in height. Paul Lucas gives the head of the sphinx 100 feet in compass, and about 70 from the chin to the top of the forehead. He thought without doubt that he ought to copy Pliny. Voyage to the Levant, t. 1. p. 46.

customed

customed to work at a statue by separate pieces. To execute this sort of works, they divided the human body into twenty-one parts and one quarter, respectively measured and proportioned to each other. When they agreed upon the height of the figure they were about to form, every workman performed in his own shop the particular part he was charged with. Although all these different pieces had been separately executed, yet they were put together and agreed with the utmost exactness ^v. Such is the relation of Diodorus; it demands some reflections.

This practice of the Egyptian sculptors, of working a statue by separate pieces, is not likely to have been a general practice, though Diodorus mentions it as such. I am persuaded, that statues of a natural size were probably of one piece, and done by the hand of a single artist. It is not the same with respect to the colossuses, which were ordinarily composed of several blocks of marble. In this case the practice Diodorus speaks of must have been very serviceable, and much in use for the readiness of the execution. Something like this I imagine to have been nearly the way they went about it. They began by making a model of plaister, or clay, as is practised at this day by our modern sculptors. They then cut this model into several pieces. Every workman took away the part that was allotted him, and worked after that pattern. In this manner we conceive how many artists might separately execute one and the same colossus.

I think I have sufficiently proved in the preceding books, that painting was not known till the epocha which is treated of in this third part ^z. The invention of it ought to be referred to the ages we are now going through. It is not possible to fix the date of it with exactness; only we see that it must have been held in honour, at or before the time of Candaules King of Lydia. Pliny says in effect, that this prince, whose reign falls about the year 720 before Jesus Christ, bought at its weight in gold a picture represent-

^v Diod. l. i. p. 110.

^z See part 2. book 2. sect. 1. c. 5.

ing a battle ^a. Herodotus tells us also, that Amasis, who reigned in Egypt 570 years before the Christian æra, had made a present of his portraiture to the inhabitants of Cyrene ^b. Painting then was known in Egypt in the ages on which we are at present employed.

I do not think these people succeeded any better in this art than in sculpture. There is even no room to doubt it, considering the intimate connection there is between painting and sculpture. Neither is there mentioned in antiquity any Egyptian painter or sculptor famous for his works. One single point in which the painters of that nation appear to have excelled, is a certain preparation they made use of for fixing colours upon marble and other bodies smooth and of close pores. They must have employed a very strong and powerful corrosive, as appears by what our travellers tell us. They assure us, that in many edifices half in ruins there are still paintings to be seen whose gloss and colouring are so lively, so fresh and so bright, that it seems, say the inhabitants of the country, as if the artist had not yet washed his hands after his work ^c. But these same travellers generally agree, that all these paintings are flat, that is to say, without any rise or opposition of colours. Leaves of gold or silver, for example, mingled with colours red and blue. The result is, that in all these compositions the figures in general cut upon the ground, and severed from it by sharp lines; the tints appearing neither softened nor shaded off.

From all that has been said we may conclude, that the Egyptians made no progress in the arts of taste and elegance. For, as I have already premised, the ages which close this third and last part of our work, ought to be regarded as the epocha which closes also the ancient history of Egypt. From the deluge to the time of Cyrus is the space to which we ought to confine that national genius which has deter-

^a L. 35. sect. 34. p. 695.

^b L. 2. n. 182.

^c Relat. du Sayd apud Thevenot, t. 2. part 3. p. 4.; Sicard, mem. des miff. du Levant, t. 2. p. 209. 211. 221. t. 7. p. 37. 165. 163.; P. Lucas, voyage to the Levant, t. 1. p. 99. 106.; Granger, p. 46. 47. & 73.

mined the character of the Egyptians properly so called. We have therefore exhausted all the facts and all the monuments which can be said to belong really to this people, and are consequently enabled to pass our judgment upon their taste, and upon their manner of treating the arts.

What I have said of the Egyptians, regards equally the Assyrians and the Chaldeans. From the time of Cyrus they ceased to be a distinct nation, and becoming successively a prey to the Persians, Greeks, and many other conquerors, they were insensibly lost and confounded with the victors. The reflections I am about to propose belong then equally to the Assyrians, Babylonians, and Egyptians. We may see under one and the same point of view, the genius and character of these different nations. Their history begins and ends nearly at the same time. Their glory and their knowledge were nearly equal, and the power and duration of their monarchy little different.

The history of the arts presents us amongst these nations with a very singular contrast. We perceive in it very early discoveries of considerable importance. Almost from the first ages we see them make a progress whose rapidity astonishes and surprises us. But these once passed we can observe no further advances. Things remain always in the same state with these people. The Asiatics and Egyptians appear to have made no advantage of the duration of their empires, to acquire new lights, or to bring their first discoveries to perfection. Their faculties seem to have been bound up and limited to a certain number of ideas, and to a degree of knowledge acquired in the earliest times, beyond which these nations never aspired. Very different from the European nations, whom we see incessantly improving their knowledge, and daily aiming at new inventions, the Egyptians and Asiatics remained almost at the same point from whence they set out. How comes it that these people did not continue to extend and perfect their discoveries; and why did they advance no further in the career of the arts, and even in that of the sciences? I think I have found in their turn of mind, and

in the principles of their government, the obstacles which retarded their progress.

In all times the Egyptians^a and Asiatics were little communicative, treating foreign nations with sovereign contempt, and never deigning to maintain any commerce or connection with any of them. They remained always confined to their own country, and never travelled. One of the principles of their government was to admit no novelty, and scrupulously to follow what had been practised by their ancestors^c. Let us add to these maxims, which alone must have brought an eternal obstacle to the advancement and perfection of human attainments, the false policy which had rendered professions hereditary in the same families^e. We have seen in the preceding book, what an injury such an institution must have been to the arts, and even to the sciences^f. The class of artisans was moreover the last of all the classes, and all who composed it were held in sovereign contempt^h; a treatment they still meet with over all the eastⁱ. These facts being admitted, we easily perceive, that there could reign no spirit of emulation amongst the Assyrians, the Babylonians, or Egyptians; every sentiment of industry and fame was necessarily stifled. We may even go so far as to believe that the condition of working men was no better amongst these people, than it is at this present in the country of the Mogul, where they are made to work with whips, and by force of menaces and ill usage^k. Let us not wonder then at the little progress of the Asiatics and Egyptians in the arts. Take away emulation, and that noble ambition which alone can elevate the soul and animate the genius, immediately all droops, and is confined to a narrow circle of endless mechanical repetitions.

^a See part 1. book 4. chap. 2. and part 2. book 4. chap. 1.

^c See Plato de leg. l. 2. p. 789.

^f See Diod. l. 2. p. 142. *et supra*, l. 1. c. 4. p. 20.

^e Chap. 4. p. 20. and following.

^h Herod. l. 2. n. 167.; Diod. l. 1. p. 85. 86.

ⁱ See *supra*, book 1. c. 4. p. 23. & 24.

^k Voyage of Bernier, t. 1. p. 304. 305. It is the same thing in China.

It was not thus with the Greeks. A skilful painter, architect, or sculptor, enjoyed the highest consideration, and the most flattering distinctions. Posterity celebrated their names in festivals. A city valued itself as much upon having produced a citizen famous for some talent, as for having given birth to a politician, a philosopher, or a general of the first merit. It is to this manner of thinking and of acting that Greece owes the pre-eminence and superiority in many branches of the arts, which it will perhaps always enjoy: and to convince ourselves of this, let us compare the productions of the Asiatics and Egyptians with those of the Greeks. Asia and Egypt present us with edifices immense and prodigious indeed; but that is all their merit. To characterise them rightly, they are nothing but enormous piles, without skill or ingenuity, the works of patience and of bad taste. In the monuments of Greece, on the contrary, all is lively and animated, elevating the soul, and spirited throughout. Grace, and fire, and genius, and the most exquisite expression, are displayed on all their parts.

Let me be indulged one reflection more on the monuments of ancient Egypt. Some are pleased to extol them, and even to pronounce without hesitation, that there is nothing amongst us worthy to be compared to them: agreed, if heaps of stones only are meant, enormous piles, without taste and without genius, such as the pyramids, obelisks, and colossuses, and in general all the pretended marvels of ancient Egypt; I am ready to own, that, in this respect, France has nothing like them to offer. But will any one compare those mis-shapen monuments, whose distance is certainly their greatest merit, with that quantity and that variety of buildings of every kind which meet our eyes in every part of the kingdom? We are so accustomed to the daily sight of these masterpieces of art, that we do not give that attention to them which is necessary to make us sensible of their value. Yet if we would reflect upon them, we should very soon judge what a superiority we have over the Egyptians, and how greatly our monu-

ments, taking them for all in all, have the advantage of those of these ancient nations *. I speak of the royal palaces, Versailles, the Tuileries, the Louvre, the Hotel des Invalides, Marly, the Observatory, &c. Let us add to these, some buildings in Paris, such as the bridges Pont Royal and Tournelle, and above all that astonishing range of quays which lines the Seine on each side. If we would estimate the time, the money, and the labour expended on all these different works, equally immense and magnificent, we shall very soon be sensible how greatly France excels all that Egypt ever produced. I might also mention that astonishing number of places fortified by M. de Vauban, the port of Dunkirk, that of Brest, Rochefort, Toulon, &c. I might also cite the canal of Languedoc †, and in general, the great roads of the kingdom: these works are greatly superior to all those of ancient Egypt. Infinitely more money has been expended, and much more genius was requisite, as well as more power, taste, and time to finish Versailles with all its defects, than to construct a pyramid, or hew out an obelisk. Let us remember nevertheless, that Versailles, and all the works I have here enumerated, were executed in the reign of one monarch.

* However extravagant and excessive were the prepossession and admiration of the Greeks for Egypt, there are, notwithstanding, writers among them who passed the same judgment on the Egyptian monuments compared to those of Greece. See Paus. l. 9. c. 36. p. 783.; the Emperor Julian in his 68th letter apud Fabric. biblioth. Gr. t. 7. p. 84.; Strabo. l. 17. p. 1159.

† The canal of Languedoc, from its entrance in the port of Cette to Toulouse, is more than 70 leagues in length, and 30 feet in breadth. They were often obliged to make angles, and wind it round the mountains, to preserve the level; to fix it upon piles in boggy grounds, to sustain it upon bridges or stone arches in the valleys, to hew down or lower certain mountains, in fine, to pierce through others, and vault them to receive this canal. They dug out above two millions of cubic fathoms of earth, and more than five thousand of rock. One hundred and fourteen sluices were constructed for barks to go up or down; sixteen enormous dykes to repel the torrent; twenty-four drains to let off the waters of the canal when it is in danger of filling up with mud or sand. In this work are reckoned upwards of forty thousand cubic fathoms of mason-work; to which are to be added the piers of two hundred fathoms, and the mole of five hundred, which cover the harbour of Cette, and make it a secure asylum for ships.

C H A P. III.

Of the Greeks.

FROM the Trojan war till the year 590 before J. C. that is, till the time of Solon and Pisistratus, we are but little acquainted with the minuter affairs of the Greeks. History, however, in this same interval, furnishes many resources and lights concerning the state of the arts amongst these people at that time. When we are upon this subject, it is essential, that we distinguish the Greeks of Europe, from the Greeks settled in Asia Minor. The arts attained but slowly enough a certain degree of perfection in Greece properly so called. Their progress was much quicker, and much more rapid, in the colonies which some time after the Trojan war were sent from Greece to settle in Asia Minor^a. In these happy countries arose the first productions which have rendered the Greeks famous to posterity. I have elsewhere shown the reasons why these first sparks of genius must have shone in Asiatic sooner than in European Greece^b, and shall not dwell upon it here. I pass on to the history of the arts as displayed in the ages which are the subject of this third part of our work.

It is in the colonies of Asia Minor that architecture began to form itself. The invention of the two first orders which the Greeks made use of, is entirely owing to the inhabitants of these countries. Their name sufficiently evinces it. The Doric owes its original to the Dorians, and the Ionic to the Ionians. The Corinthian did not appear till long after these two first orders. This last seems to have been invented in Greece, properly so called. It is the richest, the most magnificent, and the most elegant of all the Grecian orders, and perhaps of all that architecture ever invented.

^a See *supra*, book 1. c. 5. art. 3.

^b Part 2. book 3. art. 3. c. 3. § 3.

I have already had occasion to mention the manner that Vitruvius relates the origin of these orders; and I have said, that his relation had no sort of probability. It satisfies us not, and instructs us still less*. It were much better to own that we are ignorant how, or at what precise time these orders of architecture were invented. All I pretend to affirm, is, that they were known and practised in the ages we are now employed on. The superb temple of Jupiter at Olympia existed in these times^d. They had also begun that of Diana at Ephesus^e. In fine, Pisistratus had laid at Athens the foundations of a magnificent temple of Jupiter Olympius^f, without speaking of many other edifices which we may see enumerated in authors who treat particularly of architecture.

One fact, however, which I must not pass over in silence, is, that mechanics must have been as yet very imperfect amongst the Greeks. We see, that, even in the time of Thucydides, they were not acquainted with the crane. Their workmen supplied the want of this machine, so simple, but so useful, by square beams^g. The action of which was probably like that of a swipe. This fact cannot give us a great idea of the machines which the Greeks employed in the construction of their buildings.

To enter here into some detail upon the taste which then reigned in their architecture: I shall remark at first, that they employed only one order in the construction of all the monuments I have just mentioned. The custom of mingling and uniting many of them in the same edifice, did not take place amongst the Greeks till pretty late. I shall next ob-

* See part 2. book 2. sect. 2. c. 3.

^d See Paus. l. 5. c. 10. This building, according to the calculation of Pausanias, must have been erected about the year 630 before J. C.

^e Tit. Liv. l. 1. n. 45. places this event under the reign of Servius Tullius the 6th king of Rome; that is, about the year 560 before J. C. This is also nearly the calculation of Diog. Laert. l. 2. segm. 103. This author says, that Theodorus of Samos had advised to lay the foundations of the temple of Ephesus upon beds of coal. This Theodorus, by the account of Herod. l. 3. n. 41. of Aristotle de rep. l. 5. c. 11. and of Pausanias, l. 8. c. 14. flourished in the time of Polycrates tyrant of Samos, whom we know to have been cotemporary with Amasis, who mounted the throne of Egypt the year 569 before J. C.

^f Vitruv. l. 7. præfat.

^g L. 4. p. 327.

serve, that, for a long time, these people employed only the Doric and Ionic orders. The temple of Ephesus and that of Jupiter at Olympia, which we may place in the number of the most ancient monuments that enlightened Greece ever elevated, were, one of the Ionic ^a, and the other of the Doric order ⁱ. The famous temple of Minerva at Athens, built under Pericles, and that of Theseus, are also of the Doric order ^k. In fine, we see, that of the four most famous temples in which Greece, in the judgment of Vitruvius, could glory, the two most ancient were of the Ionic order, the third of the Doric, and the fourth of the Corinthian. But let us remark, that this last edifice, according to the same author, was not built till the time of the Romans ^l. In effect, it is very rare to see the Corinthian order employed in the famous edifices of antiquity. The little use the Greeks made of it would lead me to think, that their architects did not think that order sufficiently grand and majestic.

Let us add, that in all that remains of the finest works of antiquity, Greek and Roman, built in the Doric order, the columns are without a base ^{*}. Vitruvius conformed himself to this practice. This architect, who appears to have applied himself to treat of this order more exactly than of any other, says nothing of the bases of the columns, and yet he enters into many details upon those of the other orders. Be it also observed, that the orders of the Grecian architecture were neither invented nor executed in the early times, such as we see them at this day in the ruins of ancient Rome, nor with the same ornaments that our architects employ in them. Many changes and augmentations have been successively made. Amongst the Greeks architecture was but little

^a Vitruv. l. 7. præfat.

ⁱ Pausan. l. 5. c. 10.

^k Voyage de Spon, t. 2. p. 420. 455.

^l Vitruv. l. 7. præfat.

^{*} As in the theatre of Marcellus at Rome, that of Vicenza, and in a most magnificent triumphal arch which is at Verona. We may see some profiles of Doric columns without bases in M. de Chambray, p. 15. 19. & 33. particularly where he has laid down the design of an antique mausoleum which is to be seen near to Terracina. The columns of that edifice, which is of the Doric order, have no base. It is the same in a temple of Bacchus, built at Sardis in the reign of Croesus. The columns of this monument, of which we still see the ruins, have no base. See also the notes of Perrault upon Vitruv. p. 176. n. ^b at the end.

charged with ornament. The adventitious parts of their works were founded in nature. Consequently they did not in their representations think themselves at liberty to recede from truth in ornamental representation. In a word, these great masters admitted nothing but what they could justify and explain by solid, or, at least, by probable reasons. On these principles, the ancients had regulated the proportions of each of the orders they have left us ^m.

We are not however to condemn alike all the changes that have been made in the ancient architecture. Some of them are advantageous. The moderns have endeavoured to correct what appeared defective in the first models. The bases called Ionic, the only ones in use amongst the ancients, have been judged not very convenient. The capital of the same order has been found incommodious and disagreeable. It has therefore been changed. The unanimous agreement of all architects to receive and adopt these innovations, does not permit us to doubt of their being just and reasonable ^{*}.

The Greeks, moreover, reserved all the pomp and beauties of their architecture for their temples, theatres, and other public edifices. They employed them not in the houses of private people. Their dwelling-houses had infinitely less of beauty, of grandeur and magnificence, than ours. There was not a single palace, that is to say, a private building, worthy of that name in all Greece. This may be attributed to that republican spirit which reigned in all the states of that part of Europe. Exterior modesty is the appendage and favourite virtue of republics. However rich and powerful a citizen might be, he would not dare to offend the eyes of his countrymen by pompous buildings, whose lustre would have offended them, and infallibly exposed their owner to the public envy and jealousy. Let us now say a word on sculpture and painting.

^m Vitruv. l. 4. c. 2.

^{*} See the preface of Perrault upon the distribution of the five kinds of columns according to the method of the ancients, p. 24. and following, and part 2. c. 3. p. 62.

We find that sculpture and painting began also to display themselves in Greece towards the end of the ages we are now going through. Some sculptors had already acquired a shining reputation about the time of the 50th Olympiad, that is to say, about the year 576 before J. C. Dipœnus and Scyllis became at that time extremely celebrated for inventing the sculpture and polishing of marble^a. They formed many pupils whose works were greatly esteemed. Sculpture however did not attain that character of purity, elegance, and that degree of sublimity to which the Greeks carried it, till the time of Pericles, that is, more than 150 years after the artists I have been speaking of.

As to painting, it was still longer of being brought to perfection. This art, the invention of which I should readily give to the Greeks, did not appear in all its lustre till under the reign of Alexander. I am not at all surprised at it. What time and study, what diligence and thought must it not have cost to bring painting to any kind of perfection! And this art, as I think I have shown, did not begin to exist till the time of Homer^b. Accordingly, in the ages which employ us at present, the painters were still very ignorant. We see at once, that for a very long time they knew nothing of the art of mingling of colours. The first pictures that appeared were painted with only one single colour, which must have been both very harsh and very dry, since it was nothing but a water-colour made of pieces of pottery ground and finely powdered^c. This sort of painting may be thought to have resembled that which is now known to us by the name of *Brooch* * (*Camayeu*). But there is no appearance of it. The Greeks were at that time too unskilful to have understood that way of painting, which consists in softening the shades of one and the same colour. Let us judge of their skill by one fact which is warranted by many

^a Plin. l. 36. sect. 4.

The most ancient inscriptions of Peloponnesus and Attica are engraved on marble absolutely rough and unpolished.

^b See part 2. book 2. sect. 1. c. 5. art. 3.

^c Plin l. 35. sect. 5.

* The monochromaton of the ancients. See Pliny, book 35. sect. 8.

very

very celebrated writers of antiquity. They tell us, that pictures were in the beginning such wretched imitations, that they were obliged to write under them the names of the objects they were designed to represent *. It was only towards the time of Miltiades, that is, about 450 years before J. C. that the Greeks began to be able to catch a resemblance of the persons they designed to represent †. In fine, Pliny remarks, that before Apollodorus, who lived in the 93d Olympiad (410 years before J. C.), there was no picture that could attract or retain the attention of the spectator ‡.

We find moreover, that in the ages here in question, many workmen became famous in Greece by their skill in working metals, and particularly iron §. To conclude, if we were to go upon a longer examination, and make more circumstantial researches, it were easy to show, that the epocha which is the object of this third part of our work, is that to which we ought to refer the unfolding of all the sublime discoveries with which the Greeks enriched the arts in after ages. But

* Arist. topic. l. 6. c. 2. t. 1. p. 243; Ælian. var. hist. l. 10. c. 10.; Plin. l. 35. sect. 5.

The passages of Aristotle and of Ælian which I cite, are very clear and precise. We cannot say the same of that of Pliny. His phrase is dubious, as is usual with that author, who affects to shine. It has even been attempted to give this passage a sense totally contrary to that which I have imagined the true one. They will make Pliny say, that the portraits painted by the artists of whom he speaks were so like; that to make known to posterity the personages they represented, they wrote their names at the bottom of those pictures, as we now do at the bottom of portraits on copper-plates. But this explication does not appear to me to hit the meaning of Pliny. It were easy to cite in my favour the suffrage of all the interpreters and commentators of this ancient writer. They have all understood the passage in question in the sense I give it. However, without having recourse to authorities which may often appear doubtful, I think, that upon this occasion we ought to interpret Pliny by Aristotle and by Ælian. This principle established, the passage of that author confirms the fact which I have advanced upon the ignorance and unskilfulness of the first painters. I shall agree at the same time, that this explication seems in some sort to put Pliny in contradiction with himself. But it may be answered, that this is not the only example which is to be found of that in his writings. It is moreover the defect of all authors who have affected to speak in sentences and enigmas.

† Plin. l. 35. sect. 34. ‡ Ibid. sect. 36.

§ Herod. l. 1. c. 25.; Paus. l. 3. c. 12. p. 160. l. 10. c. 16.

I leave these details, which, as they again and again present objects nearly alike, might in the end fatigue the reader.

Let us remark nevertheless, that these same people, whom we cannot too much applaud for their genius in architecture, in sculpture, and perhaps also in painting, were very little industrious in procuring themselves many conveniencies, which at this day it appears impossible to do without. For example, the cloathing of the Greeks was always very defective. I have said elsewhere, that they were neither acquainted with the use of linen, nor shoes, nor stockings, nor breeches. Their coats had neither buttons nor button-holes. We shall see also that these same people neither knew the use of stirrups to mount, nor of saddles to keep themselves on horseback *. I shall observe further, that in their houses they wanted many of the most useful and agreeable inventions. They had neither glass windows nor chimneys. These people were also ignorant of the art of lighting themselves by the use of wax or tallow. I might, if it were necessary, make a longer enumeration of arts unknown to the Greeks. I should then speak of printing, of fire-arms, of the mariners compass, of chymical fluxes, of engravings in copper-plate, of mirrors, of telescopes, of clock-work, of wind and water mills, &c.; inventions which these people never knew. But what I have just said is, I think, sufficient to prove how great, in many respects, was the imperfection and ignorance of the arts among the Greeks.

* See *infra*, book 5. chap. 2.

B O O K III.

Of Sciences.

WE are arrived at the ages which close and terminate our researches on the state of the sciences amongst the ancient nations. The epocha of Cyrus is, in effect, that of the fall of the empires of Assyria, of Babylon, and even of the monarchy of the first Egyptians. We can therefore judge of all the discoveries which we ought properly to attribute to the Assyrians, the Babylonians, and the Egyptians. Those made amongst these nations posterior to the ages which close this third part of our work, can belong to them but imperfectly. It was no longer the same Assyrians, the same Babylonians, nor the same Egyptians, whose state we have hitherto considered. Their empire was destroyed, and their primitive genius changed by the mixture of other nations, to whom, after the time of Cyrus, these people continued always subject.

We shall not find it the same with the Greeks as with the Asiatics and Egyptians in the ages we are at present employed upon. On the contrary, we shall but just perceive the opening bud of all those inventions which have secured to that nation the distinguished rank which they have and will for ever possess. The epocha we are now going through, ought, however, to be regarded as one of the most considerable of the Grecian history. It was towards the end of the ages it takes in, that letters and philosophy began to take deep root in Greece, to stretch up with a rapid growth, and very soon becoming fruitful, they produced those immortal fruits with which the universe entire has, and yet continues every day to enrich itself.

C H A P.

C H A P. I.

Of Medicine.

BY the consent of all antiquity, it is allowed that the history of medicine remained involved in the darkest clouds from the Trojan war to that of Peloponnesus^a. We cannot however, suppose that the study of a science so necessary as that of medicine, should, during so long an interval, have been absolutely neglected. The sacred books attest the contrary. Solomon must have possessed a great part of the various knowledge which constitutes the art of healing. The scripture says of this prince, that he had composed treatises upon all animals, birds, and fishes, and that he had wrote upon all plants, from the cedar of Lebanon to the hyssop^b. Many other facts related in the sacred books attest equally the knowledge and the usage of medicine in the ages we are at present employed upon.

We see, that there were in these times physicians by profession among the Hebrews. Afa, king of Judah being attacked by the gout, is reproached for that “he sought not “to the Lord, but to physicians^c.” Hezekiah, threatened with death from an abscess, is cured by the application of a cataplasm of figs^d. Joram king of Judah, wounded in a battle, retires to Jezreel to be healed^e. We gather also from many expressions of the prophets, that they then knew how to cure wounds, fractures, and bruises, by means of certain medicaments, such as rosin, balsam, oils, and the

^a Celsus, l. 1. in præfat.; Plin. l. 29. sect. 2. p. 493.; Isidor. orig. l. 4. c. 3.

^b 1 Kings c. 4 v. 33. With the other knowledge that Solomon attributes to himself in the book of Wisdom, he places the diversities of plants and the virtues of roots, c. 7. v. 20.

^c 1 Kings c. 15. v. 23; 2 Chronic. c. 16. v. 12.

^d 2 Kings c. 20. v. 7.; Isaiah c. 38. v. 21.

^e 2 Kings c. 8. v. 29. c. 9 v. 15.

fat of animals^f. It even appears that physicians were held in great esteem amongst the Asiatic nations. "Honour a physician," says the Ecclesiasticus, "for the uses which you may have of him^g."

As to the Greeks, although we are ignorant of the state and progress of medicine amongst these people from the Trojan war to that of Peloponnesus, yet it is certain, that the Asclepiades, that is to say, the descendents of Æsculapius, preserved that science in their family without any interruption. They reckon three celebrated schools established by them, one at Rhodes, another at Cos, and the last at Cnidos. Herodotus, who was anterior to Hippocrates^{*}, speaks also of many other very famous schools of medicine. Let us add that of Italy, which owed its rise to Pythagoras, and whose erection we cannot place later than the year 550 before J. C.^h.

The poems of Homer furnish still plainer proofs of the state of medicine, and of the progress it must have made, at the time in which this great poet lived. We find in his writings abundance of anatomical details. Homer gives a nominal description of almost all the parts of the human body; more than that, this poet must have had a great knowledge of their structure and of their functions, to judge of it by his description of wounds, and the accidents resulting from them. We might even reproach him with having in this respect affected to make a parade of his skill. However this may be, these facts do not permit us to call in question the great insight which in his time they had acquired in medicine. Nevertheless one reflection arises, which, at the first glance, should seem to make this anatomical knowledge so remarkable in the writings of Homer, difficult to be conceived.

If we may believe an ancient commentator on Plato, Alcmeon, a disciple of Pythagoras, passed for the first who

^f See Isaiah c. i. v. 6.; Jerem. c. 8. v. 22.; Ezek. c. 30. v. 21.

^g C. 38. v. 1.

^{*} This great physician flourished in the time of the Peloponnesian war, about the year 430 before J. C.

^h See Le Clerc, hist. of medicine, part 1. book 2. c. 1. & 2.

had anatomized animalsⁱ. Aristotle, whose time was not till more than eighty years after Hippocrates, tells us, besides, that in his days the Greeks had not yet dared to dissect the human carcase. When this philosopher speaks of the internal parts of man, he says, they are greatly unknown, that we have nothing certain on their structure and arrangement, and that we must judge of them from the resemblance they should have to the parts of other animals which may have some conformity with each of them^k. How then is it possible, that, in the age of Homer, anatomy should have been carried to a sort of accuracy and exactness?

This objection which at first we might judge very strong, ceases nevertheless to appear so, when we reflect on the various means which men have always had to instruct themselves in the frame of the human body. I have explained these means in the first part of this work^l. We may also consult, on this subject, what Daniel Le Clerc says in his history of medicine. There this learned man makes us easily conceive, how the ancient physicians may have acquired a knowledge of the internal parts of the human body, without having been, for all that, in the habitual practice of dissection^m.

I am, besides, apt to believe, that the people of Asia had not the same scruple as the Greeks about opening of human carcases. Homer may therefore have drawn from them that anatomical skill which he has displayed in his works. For though we cannot precisely determine the country of this prince of poets, it however appears to me beyond a doubt, that he was born, and passed a great part of his life in Asia Minor. This is an opinion which I have already taken pains to establish. I have even thought, that, of consequence, we ought to refer to these people, certain sciences too delicate and refined for Homer to have

ⁱ Chalcid. in Tim. Plat. p. 30.

^k Hist. animal. l. i. c. 16. *init.*

^l Book 3. c. 1. art. 2.

^m Hist. of medicine, part 1. book 2. p. 74. & 75.

learned them in the bosom of Greece properly so called. We ought not to give the honour of them to the inhabitants of that part of Europe. In the ages this poet appeared in, they were still very ignorant and unpolished.

I think I have said enough to shew, that if we find a void in the history of medicine, from Podalirius and Machaon, the sons of Æsculapius, till the time of Hippocrates, it is not because the study of that science was neglected in this interval. We ought to attribute the ignorance we are in of the names and capacity of those who cultivated medicine at that time, only to the times in which they lived. The history of those ages is most confused and defective. The physicians are not the only people who have cause to complain of it. We shall have but too many occasions to be convinced of it with regard to many other objects.

C H A P. II.

Of Astronomy.

THE history of astronomy, in the ages we are now going through, is not altogether so barren as that of medicine. The writers of antiquity give us something more assistance in examining the state of that science in these times amongst the different nations of whom we are to speak. The Babylonians, the Egyptians, and above all the Greeks, enable us to present the reader with some curious and interesting details. Let us first examine the state of astronomy amongst each of these people in particular. We shall proceed to offer some general ideas resulting from the different facts we are about to relate.

A R T I C L E

ARTICLE I.

Of the Babylonians.

AS it is known how dark is the history of the Babylonians and Assyrians, we may be thought not very competent judges of the discoveries and of the progress which these people had made in astronomy. Nevertheless it will appear, that by collecting and comparing the different tracts we find scattered through the authors of antiquity, a pretty just idea may be formed of the astronomical learning of the Babylonians.

The Chaldean astronomers had learned that the sun and the planets had a motion proper to themselves from west to east, and that these revolutions were made with great inequalities of time, and with very different degrees of velocity^a. They taught, that the moon is placed below all the stars, and below all the planets; that as it is the least of all those which we perceive, it is also the nearest to the earth^b; that its revolution is performed in less time; not that it has a greater velocity than the other planets, but by reason of the small extent of its orbit. They knew, moreover, that the moon has only a borrowed light, and that its eclipses are caused by its immerging into the shadow of the earth^c.

The Chaldeans reckon but 36 constellations; 12 in the zodiac, and 24 without that circle. They distinguished these last into northern and southern^d. They had divided each sign of the zodiac into 30 degrees, and each degree into 60 parts, or minutes^e. By this method the Chaldeans had

^a Diod. l. 2. p. 144; Simplic. in l. 2.; Arist de cælo, fol. 117. verso.

^b Diod. l. 2. p. 144. This passage of Diodorus deserves attention. How came the Chaldeans to guess that the moon is in reality the least of the planets? This was probably on their part only mere conjecture.

^c Diod. l. 2. p. 144. 145.

^d Diod. ibid.

^e Gemin. c. 15. p. 62.; S. Empiric. adv. astrolog. l. 5. p. 339.

found the mean motion of the moon. They had thus attained to determine the periodical return of that planet with a good deal of exactness^c.

The advantage which these astronomers had, of having very early invented the means of measuring exactly the different parts of the day, ought to give us a pretty good idea of their astronomical calculations. It is generally agreed, that they were the first who knew the use of sundials^c. Accordingly they passed for the first who had undertaken to measure the length of the sun's annual revolution^d. Their observations, in this respect, were not fruitless. We see, that, in the reign of Nabonassar, the year amongst these people consisted of 365 days. The ancients make this clear enough, by telling us, that the years, formerly called the *years of Nabonassar*, answered, month for month, and day for day, to the civil year of the Egyptians^e.

If it were necessary, we might alledge the usage of the Persians in further confirmation of this opinion. From the reign of Cyrus this nation had regulated their year to 365 days^f; and we know that Cyrus is the first who subjected the empire of Babylon to the throne of Persia.

It is not so easy to determine at what time the Babylonians discovered the necessity of adding to their common year, the five hours and some minutes by which the annual revolution of the sun surpasses the length of 365 days. It is certain, that this discovery had not escaped the Chal-

^c Gemin. c. 15, p. 62. We may doubt however whether all this skill was very ancient among the Chaldeans. See Wiedler, hist. astronom. c. 3. p. 35.

^d Herod. l. 2. n. 109. Herodotus does not fix the epocha of this discovery. We ought to judge however, that it must have been very ancient. We find sundials in use at Jerusalem in the time of Ahaz, that is to say, five years before the æra of Nabonassar. 2 Kings c. 20. v. 11. 2 Chron. c. 32. v. 31. It is very probable, that Ahaz had the knowledge of that mathematical instrument from the Babylonians. In effect, we learn from scripture, that this prince was in great union with Tiglath-Pileser, king of Assyria. 2 Kings c. 16. v. 8. &c.

^e Achill. Tat. ad. Arati phænomen. c. 18.

^f Censorin. de die nat. c. 21. See in the following chapter our remarks on the civil year of the Egyptians.

^g Q. Curt. l. 3. c. 3. p. 154. See also Diod. l. 2. p. 120.

dean astronomers. Strabo assures us of it in very precise terms ^z; but he does not fix the epocha of it. However, the manner in which he expresses himself, gives us sufficiently to understand that this knowledge was very anciently received in Chaldea. We have therefore good authority to believe, that, in the course of the ages now under consideration, the year of the Babylonians consisted of 365 days and some hours *. We may even believe, that, in this respect, they had come very near the truth. I shall elsewhere speak of it more particularly ^a.

We have still the names of the ancient astronomical periods, whose invention was due to the Chaldeans. Berosus has made use of them for his chronological calculations ^b. Yet these measures of time, which were then in familiar use, are now but little known. Many difficulties arise about the number of years of which each of these periods was composed. The efforts which some modern critics have made to clear them up, do not hitherto give full satisfaction. That I may not interrupt the relation I am making of the astronomical learning of the Babylonians, I shall give an account of these different periods in a particular dissertation ^c.

The system of comets which the Chaldeans had formed, merits also some attention. Apollonius of Mindus, a

^z L. 17. p. 1160. A.

* Ubo Emmius, and after him Munkerus de intercalat. l. 3. c. 2. give us to understand, that the year of the Chaldeans was only of 365 days. They say, that to repair the confusion produced through time, by the omission of the fourth of a day, these people composed a month of it, which they added to their ordinary year at every 120 years; that by this means every 120th year consisted of 395 days, that is to say, of 13 months. But these writers cite no author of antiquity in support of their opinion, and besides they are formally contradicted by Strabo, as we have seen. We may therefore boldly place this opinion in the number of those airy systems, which have no other foundation than the imagination of the author who gave them birth.

^a In the dissertation on the astronomical periods of the Chaldeans, at the end of this volume.

^b See Syncell. p. 17.; Abyden. *apud eund.* p. 38. C.

^c See, at the end of this volume, the dissertation on the periods of the Chaldeans.

celebrated astronomer, tells us, that the Chaldeans, amongst whom he had studied, regarded comets as planets whose revolution was performed in orbits very excentric to the earth, and that these stars became visible only in their progress through the lower part of that orbit. The same astronomers pretended also, according to Apollonius, to know the course of the comets and the duration of their periods^d. Pliny, Plutarch, and Stobæus, speak also very clearly of this system of the Chaldeans^e. I imagine however that more was due to chance and uncertainty than to study and experience^f. The ancients knew nothing certain of this, nor of the greatest part of the phenomena of physical astronomy.

We may also place in the number of the astronomical attainments of the Chaldeans, the ideas they had formed of the extent of the circumference of the terrestrial globe. They had found out, it is pretended, that a man, walking a good pace, might follow the sun round the earth, and would reach the equinoctial at the same time with that star^g; that is to say, that in the space of a solar year, which the Chaldeans, as we have seen, determined at

^d *Apud Senec. quæst. nat. l. 7. c. 3. t. 2. p. 820. & c. 17. p. 831.*

^e *Plin. l. 2. sect. 23. p. 89. ; Plut. t. 2. p. 893. ; Stob. eclog. phys. l. 1. p. 63.* Pliny and Plutarch do not expressly say, this was the system of the Chaldeans; but we may presume, that the ancient philosophers of Greece learned among these people what they say on comets. Seneca and Stobæus authorise us to believe it; since it appears by their writings, that this opinion upon the comets was very anciently established in Chaldea.

^f Seneca will furnish us a proof of it in the same passage I have just cited, p. 820. He speaks there of another astronomer, named *Epigenes*, who said, that the Chaldeans knew nothing certain of the comets, and that they looked upon them as meteors, kindled by the effort of some vortex of air violently agitated. These contradictions ought not to surprise us. There were many schools amongst the Chaldeans. Pliny reckons three, l. 6. c. 26. p. 332. Different systems were taught in all these schools, according to the testimony of Strabo, l. 16. p. 1074. Thus Apollonius related that which was adopted in the school where he had studied, and Epigenes what was delivered in the one which he had followed; and there were then no reasons which could give one system more credit than another.

^g *Achill. Tat. ad Arati phænom. c. 18.*

365 days and some hours, a man walking at a good rate, might make the tour of the earth, and would do it effectually, if he could always keep up an equal pace *.

This is all we have been able to collect of most precision upon the astronomical learning of the Chaldeans. They had, as we see, made some progress in certain parts of that science; but there were many others, and those of the greatest importance, which were absolutely unknown to them. The Chaldeans, for example, had but a very imperfect theory of solar eclipses. They durst neither determine nor foretel them^b. Their ignorance in this matter does not proclaim any very exact knowledge, or very extensive intelligence of the celestial phænomena. It may even be doubted, whether they did not acquire, in much later times, some part of the discoveries which I have thought might be ascribed to them in the ages treated of in this third part of my work^c. In reality, notwithstanding the conquest of the Babylonian empire by Cyrus, and afterwards by Alexander, the Chaldeans always continued to be held in great consideration, on account of the extreme respect which prepossessed the ancients in favour of the skill which these priests are said to have acquired in judicial astrology. The destruction of the empire of Babylon did not then disable the Chaldeans from perfecting their astronomical discoveries; and Diodorus, from whom I have borrowed most of the details I have here given account of, was not acquainted with these astronomers till long after the time of Alexander.

There remains no more but that I take some notice of the observatory of the Babylonians. The principal object of the ancient astronomers, was to perceive and catch the exact moment of the rising and setting of the stars. The

* A man commonly makes a league an hour; of consequence, could he always proceed without stopping, he would make 24 a-day, and 8760 in 365 days. We know that the circumference of the globe, about the equator, is about 9000 leagues. It results from this calculation, that the Chaldean astronomers had pretty just notions of the magnitude of the earth.

^b Diod. l. 2. p. 135.

^c See Weidler, hist. astron. c. 3. p. 35.

most favourable places for this purpose which they first thought of, were extended plains, open on all sides, where the eye might discover a vast and unbounded horizon. Plains were then, for many generations, the only observatories in use. But the civilized nations soon sought to procure themselves means of observing the course of the stars with more facility and exactness. In this view they constructed edifices whose elevation gave them more advantage. The Babylonians were not the last to avail themselves of this practice. I have already had occasion to speak of the temple of Belus, so renowned amongst those ancient people^{*}. This edifice inclosed in its centre an extremely elevated tower, whose construction appears to have been more ancient than that of the temple itself¹. It was from the summit of this tower that the Chaldeans made their principal observations^m.

ARTICLE II.

Of the Egyptians.

THE Egyptians, after the Greeks, are the people of antiquity whose progress in the sciences we can the most easily trace. I have related, in the preceding books, the different ways that the Egyptians had regulated their year, first at 360 days, and afterwards at 365. Let us examine whether, in the ages we are now going through, they had attained any greater degree of exactness.

The sun employs in his annual revolution 365 days and about six hours. I have given account of the motives which determined me to believe, that it was in these ages that the Babylonians had made discovery of this overplus of the fourth of a day. I am not equally led to believe that the Egyptians had also made the same discovery. Here are the motives which incline me to think otherwise.

Thales is the first of the Greeks who gave 365 days to

^{*} *Supra*, book 2. chap. 1. p. 57.

¹ See Prideaux, *hist. of the Jews*, t. 1. l. 2. p. 218. 222.

^m *Diod.* l. 2. p. 123.

the year. This philosopher lived about the year 600 before the Christian æra. History remarks, that he had no other master than the Egyptians^a. Therefore, in the time of Thales, the Egyptian year still consisted of no more than 365 days.

Herodotus wrote in the fifth century before J. C. This great historian, whose testimony is so respectable in all that concerns the ancient Egyptians, says, speaking of the year of this people, that it consisted of twelve months, each of thirty days, to which five days more were added every year. By this means, continues he, they contrived to make the periodical return of the seasons answer to the same months of the year. We see by these last words, that Herodotus had not perceived the inconvenience of the confusion of seasons, which must necessarily happen in a long course of years of 365 days; and this is still another proof, that in his time the Egyptian year was limited to the like number of days.

In fine, it appears by Strabo, that the Egyptians knew not the necessity of adding six hours or thereabouts to the 365 days of the common year, till about the time that Plato and Eudoxus travelled amongst these people. At least, it is certain, from the testimony of this geographer, that these two philosophers learned this particularity from the Egyptian priests, and that till this time the Greeks were ignorant of it^b. There is then great appearance, that the Egyptian astronomers made this discovery in the interval of the time elapsed between the voyage of Herodotus and that of Plato into Egypt, an interval of more than 80 years. The manner in which, according to Strabo, the priests imparted this to Eudoxus and Plato, serves, I think, to confirm this opinion. He represents this knowledge as a sort of mystery which they would not communicate to any but privileged persons^c. The learned of Heliopolis, says he, explained in secret to our two philosophers the true duration of the solar year^d. It was even only by an abode of thirteen years, that Plato and

^a Diog. Laert. l. 1. segm. 27.; Clem. Alex. Strom. l. 1. p. 352.

^b Strabo, l. 17. p. 1159. 1160.

^c Ibid. p. 1159.

^d Strabo, *ibid.*

Eudoxus

Eudoxus could so far merit the confidence of these priests as to obtain the communication of this important discovery^r. We ought not, as to the rest, to be surprised that the Egyptians should have then made a mystery of it. The more recent this discovery was, the more likely were they to be jealous of it.

It may be said, that if Herodotus has not spoke of this overplus of the fourth of a day, it is, that, in all probability, he may have been deceived by the practice of the Egyptians. This people had two computations of the year, the one civil, the other astronomical^s. This last was of 365 days, and some hours; but their civil year had only 365 days^t. It was not without design that the Egyptians had thus regulated it. They did not want their festivals to return always to the same day. On the contrary, their intention was, that they should successively run through all the seasons of the year^u. The Egyptians admitted then no intercalation in their civil years. They were constantly of 365 days^x, which occasioned their gaining a day every four years upon the true solar year, with which these vague and retrograde years met only every 1460 years. It is only of this civil year of 365 days, it may be said, that Herodotus intended to speak, by so much the more as it subsisted under that form among the Egyptians, even many ages after that in which Herodotus wrote. We learn it in the writings of Geminus, of Censorinus, and of Theon of Alexandria^y.

But if these two computations of the year had been known in Egypt in the time of Herodotus, is it to be supposed that an historian so exact, and so intelligent, would have neglected to have informed us of a particularity of this nature? Would he, moreover, have advanced in such plain terms, that, by means of such a year, the Egyptians contrived to make the periodical return of the seasons fall

^r Id. *ibid*.

^s See Diod. l. 1. p. 59.; Strabo, l. 17. p. 1171.

^t See the mem. of the acad. of inscript. t. 14. p. 340. 350. 351.

^u Gemin. p. 33. Censorin. c. 18. Theo. Alexandrin. frag. apud Petav. *uranolog*.

^x Gem. Censor. Theon. Diod. Strabo, *ubi supra*.

^y See *loco supra citat*.

in the same months of the year? It is most certain, that Herodotus, otherwise greatly versed in all the learning of the Greeks and Egyptians, was very ignorant of astronomy. We have already produced proofs of it, and the present example is a new conviction.

In effect, if this great historian had better understood the time that the sun employs in performing his annual revolution, he would not have said that a course of years of 365 days would procure the periodical return of the seasons in the same months of the year. But this error into which Herodotus has fallen, is an incontestable proof that he knew no better; and this is the sensible difference we remark between this historian and the authors last quoted. When these last speak of the civil year of the Egyptians, whose duration they mark at 365 days, there is not one of them but what mentions, at the same time, that fourth part of a day by which the true solar year exceeds that of 365 days. Besides, Herodotus had sojourned a considerable time in Egypt. He had even, as appears by his writings, insinuated himself too far into the good graces of the priests of that nation, for them to have refused to reveal this discovery to him, if they themselves had at that time known it, as they afterwards did to Eudoxus and Plato. We should say as much of Thales, since history expressly remarks, that he had entirely gained the confidence of the Egyptian priests². After these reflections, it appears to us impossible to attribute to the Egyptians, in the ages we are now employed on, the knowledge of the six hours or thereabouts by which the annual revolution of the sun exceeds 365 days.

It is not to be presumed, that the astronomers of Egypt had made very important discoveries on the magnitude of the stars. We may judge of them by that which they gave the moon. They believed that planet to be 72 times less than the earth¹. What Macrobius relates of the method, which the same sages employed to find out the

¹ Diog. Laert. l. 1. segm. 27.

² Plut. de facie in orbe lunæ, p. 932. A.
proportion

proportion of the sun's diameter to his orbit, is not very apt to give us a great idea of, their astronomical discoveries^b. The manner in which he speaks of it not permitting us, besides, to doubt that this practice belonged to the ancient Egyptians; I shall try to explain it*.

According to Macrobius, the astronomers of Egypt placed upon an horizontal plane an hemispherical vase, the interior surface of which carried a style which passed through its centre, and rose at right angles upon the plane of the circle, of which the edges of this vase made part. These edges were divided into two equal demi-crowns, of which one was subdivided into twelve parts also equal; that is to say, into twelve segments of fifteen degrees each. They turned this vase to the east in such a manner, that the position of the style which they had adapted to it should answer precisely to that of the axis of the world, and that the twelve divisions, just mentioned, should appear at the lower part, in such sort, that the diameter of the mouth of the vase, which terminated these twelve parts, should be found exactly parallel to the horizon. All this apparatus tended, as it is easy to be convinced, only to produce the effect of an equinoctial dial, the construction of which is infinitely more easy and simple. However that might be, it was, according to Macrobius, by the help of such an instrument, that the astronomers of Egypt imagined themselves able to determine what proportion there was between that part of the sun's orbit which is occupied by the body of that star, and the whole of that orbit. The very day of one of the two equinoxes, says that author, they observed and marked upon the edges of the mouth of their hemispherical vase, the point where fell the shadow of the style which passed through its centre, at the instant when the

^b In somn. Scip. l. i. c. 20. p. 100. &c.

* Nothing is more obscure than this explication given by Macrobius of the procedure of the Egyptian astronomers in the operation in question. I dare not flatter myself with having rendered, as exactly as I could wish, the true sense of this author. But I am certain, that, in what manner soever we understand this passage, we shall never discover any thing in it capable of giving us a great idea of this astronomical operation.

upper edge of the sun's disk appeared upon the plane of the horizon. The evening of the same day they observed and marked in the same manner, the point of the half-circumference, opposite to the edges of their instrument, upon which fell the shadow of the style at the precise moment when the sun's disk began to touch the horizon with its lower edge. The difference of the interval of the two points of shadow to the entire half-circumference, or 180 degrees, was found to be the ninth part of one of the twelve horary divisions or $1\frac{2}{3}$ degrees; from whence the Egyptians concluded, that the diameter of the sun was precisely the two hundred and sixteenth part of its orbit^c; a conclusion which it is not easy to reconcile to the most simple notions of elementary geometry*, but which it would be very easy to rectify if the object were worth the pains, which I am very far from thinking. For, indepen-

^c Macrob. loco *supra* cit.

* It suffices to have read the three first books of Euclid's elements, to be able to perceive that the result of the operation of which Macrobius speaks, gives the semidiameter of the sun equal to the chord of an arch of 50 minutes of the circular orbit which he describes; whereas the Egyptian astronomers made it equal to the arch itself of 50 minutes, since they took the arch of 1 d. 40' for the precise measure of the diameter of that star.

The translator confesses, that he could not obtain a clear idea of this instrument either from M. Gouget or from Macrobius. That the reader may judge for himself, he has laid the original before him.

Æquinoctiali die ante solis ortum æquabiliter locatum est saxeum vas in hemisphærii speciem cavata ambitione curvatum, infra per lineas designato duodecim diei horarum numero, quas styli prominentis umbra cum transitu solis prætereundo distinguit. Hoc est autem, ut scimus, hujusmodi vasis officium, ut tanto tempore a priore ejus extremitate ad alteram usque styli umbra percurrat, quanto sol medietatem cœli ab ortu in occasum unius scilicet hemisphærii conversione metitur. Nam totius cœli integra conversio diem noctemque concludit. Et ideo constat, quantum sol in circulo suo meat, tantum in hoc vase umbram meare. Huic igitur æquabiliter collocato circa tempus solis ortus propinquantis inhæsit diligens observantis obtutus: et cum ad primum solis radium, quem de se emisit prima summitas orbis, emergens umbra de styli decidens summitate primum curvi labri eminentiam contigit; locus ipse, qui umbræ primitias excepit, nota impressione signatus est; observatumque quamdiu super terram ita solis orbis integer appareret, ut ima ejus summitas adhuc horizonti videretur insidere, et mox locus ad quem umbra tunc in vase migraverat, adnotatus est, habitaque dimensione inter ambas umbrarum notas quæ integrum solis orbem, id est, diametrum, natæ de duabus ejus summitatibus metiuntur, pars nona reperta est ejus spatii, quod a summo vasis labro usque ad horæ primæ lineam continetur.

dently of the misreckoning which must have been produced by the little exactness of the singular instrument spoke of by Macrobius, the refractions, on the equality of which depended the justness of the operation in question, are greatly different morning and evening; and the transparency of the air at the moment of the sun's mounting the horizon, is nothing near the same as at the moment of its setting. Again, to leave the relation of our author, all this operation of the Egyptian astronomers tended only on their part to determine the real magnitude of the sun's diameter. Of consequence, it could be of no use to them, further than they had been able to find out the precise dimensions of his orbit. And this is a point on which all the knowledge which Macrobius supposes them to have had, is reduced to very vague and uncertain conjectures.

Other authors attribute to the Egyptians a method still more defective, to determine the proportion of the sun's diameter to the orbit he describes. The moment they began to discover the first rays of that star, they caused, say they, a horseman to start, who galloped till the disk of the sun was entirely risen. They then measured the space which this horseman had run in the time the sun had taken to rise upon the horizon; and as they knew how far the courser employed on this occasion could run in the space of an hour, they determined, by a rule of three, the time that the diameter of that star had employed to rise upon the horizon^a. It is easy to perceive how erroneous this way of measuring time must have been, and how little capable it was of supplying the invention of clocks.

As to the other astronomical attainments which the ancients have attributed to the Egyptians, we see few of them that can be said to belong properly to the ages we are now engaged in; but it is not the less certain, that those people had then made some progress in astronomy. They had particularly applied themselves to study the mo-

^a Weidler, *hist. astronom. c. 4. n. 12. p. 58.*

tion of the stars *. The Egyptians are said to have known the cause of the eclipses of the moon. They knew that they were occasioned by the shadow of the earth, into which that planet then immerses †. The astronomers of Thebes, or Heliopolis in particular, were reckoned very skilful in calculating of these phænomena, and even the eclipses of the sun, of which they gave beforehand a pretty just and exact detail ‡. History has preserved us one celebrated example of this, on the subject of that famous eclipse which separated the armies of the Medes and Lydians the moment they were engaged in battle. Thales had foretold that eclipse §, and we have already seen that this philosopher owed all his astronomical learning to the Egyptians. They had also suspected that the comets were stars that had periodical returns ¶. They had, moreover, attained the construction of astronomical tables, by means whereof they ascertained, with tolerable exactness, the revolutions of the planets, with their direct, stationary, and retrograde motions **. I have already given account of many of these astronomical attainments in the first part of this work, in treating of the discovery of the planets.

Furthermore, the Egyptians are said to have perceived that the sun was the centre of the motions of Mercury and Venus; and that, in certain positions, these two planets passed sometimes above and sometimes below the sun †. We ought to look upon this important discovery as a proof how anciently observations were made upon the planets. But it appears certain to me, that the Egyptians had not yet acquired that knowledge of the motions of Mercury and Venus, in the times we are now going through. We find no traces of it in the most ancient authors. Vitruvius is

* Diod. l. 1. p. 59. 91. 92. ; Strabo, l. 17. p. 1171.

† Diog. Laert. præem. segm. 11.

‡ Diod. l. 1. p. 59.

§ Herod. l. 1. n. 74.

¶ Diod. l. 1. p. 92. There is great appearance that Pythagoras had drawn from Egypt the system which his disciples delivered upon comets. See Arist. metereol. l. 1. c. 6. *init.* ; Plutarch. de placit. philos. l. 3. c. 2. *init.*

** Diod. l. 1. p. 59. 91. 92.

† Macrobi. in somn. Scip. l. 1. c. 19. p. 92. 93. See also Vitruv. l. 9. c. 4. ; Mart. Capella de nupt. Philol. et Merc. l. 8.

the first who has spoke of it; and it is very singular that Ptolomy, who was posterior to Vitruvius, should appear to have been absolutely ignorant of that discovery. For, if this great astronomer had been acquainted with it, in all appearance he would never have contrived such a system as he has left us.

There are great appearances, that the system which supposes the earth as a planet to revolve round about the sun, was not absolutely unknown to the Egyptians, even in the times we are going through in this third part. We know, that some Grecian philosophers, and particularly the disciples of Pythagoras, had a glimpse, a very obscure and imperfect one indeed, that our earth and the planets did revolve both round a common centre and round their own axis at the same time^m. Difficult would it be to explain what they understood by this double motion which they gave to the planetsⁿ. They had no very clear ideas of the motion of the earth upon its own axis, nor of the use which might be made of it to explain the diurnal revolution^o. Their system was extremely confused and inexplicable^p. The manner in which they explained the apparent motions of the stars and of the heavens, by the rotatory motion of the earth, presents contradiction upon contradiction^q. However that may be, it is to the Egyptians, nevertheless, that we ought to ascribe these first ideas. We know that the greatest geniuses of Greece travelled into Egypt, and drew thence the learning with which they enriched their country. I repeat it, after this fact, we cannot conceive how Ptolomy, who had passed his days in Egypt, could have been ignorant of it, or, at least, how he comes to have taken no notice of it. It is true, that the system of this great astronomer is in some sort more conformable to our senses. It is sufficient for astronomers who observe only the appearances of the celestial bodies. But it was not difficult, by rectifying the ideas of the Py-

^m See mem. of the acad. of inscriptions, t. 9. M. p. 2. & 3. ⁿ Ibid. p. 6.

^o See Plutarch. de placit. philos. l. 3. c. 13.; Achill. Tat. isag. c. 10.

^p See mem. of the acad. of inscript. t. 9. M. p. 2. 3. & 6.

^q Ibid. p. 3.

thagoricians,

thagoricians, to establish notions much more simple, much more conformable to the laws of nature, and for that very reason more worthy of philosophers. Copernicus has well shown us what advantage might be made of such discoveries. But then the age of Copernicus was much more enlightened than that of Ptolomy. Besides, all the notions which I have been relating were rather conjectures and ideas formed at random, than discoveries founded on reasoning and experience^r. This is perhaps the very reason why Ptolomy, though he might have known them, would not take notice of them. These reflections, however, are foreign to our subject. Let us return to the Egyptians, and speak of the ideas which these people appear to have had of the matter of which the fixed stars and the planets were composed.

They said, that the stars were of fire^r, and they called the moon an ethereal earth^t. I also take the Egyptians to have been the first authors of the plurality of worlds. Orpheus is the most ancient writer who has delivered that opinion amongst the Greeks^u. Proclus has preserved us some verses, in which we see that the author of the Orphics placed mountains, men, and well-built cities in the moon^x. It is also very certain, that the Pythagoricians taught, after Orpheus, that each planet was a world, consisting of earth, air, and æther^y. Apparently these philosophers placed in these worlds all that may be in ours, since they believed them entirely alike. It is, moreover, from the Egyptians, that Orpheus and the Pythagoricians held these singular opinions. For it is known, that Orpheus and Pythagoras were indebted to Egypt for all

^r See *infra* what we say on this pretended knowledge of the ancient philosophers, art. 4.

^t Diogen. Laert. *præem.* segm. 11.

^u Procl. in Tim. l. i. p. 45.

^x Plut. de placit. philos. l. 2. c. 13.; Euseb. præparat. evang. l. 15. c. 30.; Stob. l. 1. eclog. physic. p. 54. lin. 24.

^y In Tim. l. 4. p. 283. We may doubt whether the poems formerly cited under the name of Orpheus, were really the work of this famous philosopher. It is certain nevertheless, that these poems were extremely ancient. They were looked on as such in the time of Plato. In Cratyl. p. 276. E. See also Jamblic. de vita Pythag. c. 34. p. 196.

^z Plut. Stob. *locis cit.*

their learning^z. Accordingly I have not hesitated to attribute this system to the ancient Egyptians.

I conclude what concerns the history of astronomy amongst these people, by some reflections upon the position of the pyramids of Cairo. In the last age, it was attempted to ascertain the variation or immutability of the poles of the earth and the meridians. For this purpose, it was necessary to compare, with our observations, those of the ancient astronomers, and to know exactly the longitude and latitude of the places they had inhabited^a. On one side, M. Picard went in 1671 to verify the observations made by Tycho-Brahe in the island of Huen^b. On another, M. de Chazelles went in 1694 to measure the pyramids of Egypt. I shall say nothing at present of the operations of M. Picard, that I may give all my attention to those of M. de Chazelles. Having measured the pyramids, he found that the four sides of the greatest answered precisely to the four cardinal points of the horizon. Such a position, which seems to have been the effect of design and premeditation, necessarily supposes astronomical knowledge. But, in my opinion, they have carried too high the idea under which they ordinarily present this operation of the Egyptians. They have laboured to heighten the merit of it by the comparison made between it and the meridian, traced at Uranibourg by Tycho-Brahe. M. Picard was greatly astonished when he examined that meridian, to find it different in longitude by about 18 minutes from the position which Tycho-Brahe had assigned it^c. Tycho, however, assures us that he had been at pains to determine it^{*}. And it is the more likely, as this was a fixed

^z Diod. l. 1. p. 107.

^a Acad. of scienc. ann. 1710, hist. p. 149.

^b Ibid.

The island of Huena or Veen is in the straits of the sound, at the entrance of the Baltic sea. It is there that Tycho caused to be built, in 1576, that famous observatory which he called *Uranibourg*, or *city of the heavens*.

^c Acad. des scienc. anc. mem. t. 7. p. 206.

^{*} Tycho says expressly, that it was for the second time that he had carefully taken his angles of observation, and after having verified the meridian line. Ibid. t. 7. p. 203.

point to which all his observations related. The Egyptians, say they, more dexterous, or, at least, more lucky than this great astronomer, have succeeded in southing their pyramids with an exactness, which is still matter of astonishment; of astonishment the better founded, as these people were, in appearance at least, destitute of the lights and helps necessary for such an operation^a. However that may be, the operation of the Egyptian astronomers will bear no comparison in any manner with that of Tycho. It is evidently, and, beyond contradiction, infinitely more easy to south any edifice, such as the pyramids especially, than to determine precisely the longitude of any place whatsoever. For the one we need only draw a meridian; but for the other repeated observations must be employed, and those of a kind which demand great study, knowledge, experience, and precision.

For the rest, though I think the southing of the pyramids has been too highly extolled, yet I am of opinion that it were unjust not to allow the Egyptians a pretty extensive knowledge in astronomy. This nevertheless is what many writers of merit have thought fit to refuse them^c. The reason they alledge is, the little progress which these people, as they pretend, had made in geometry. Indeed, if this fact were well proved, I own we could not conceive a great idea of the astronomers of Egypt; but then this suspicion of their ignorance in geometry is founded only on conjectures; and even these conjectures arise only from inductions drawn from the geometrical discoveries of which the Greeks boasted themselves to be the authors. When we come to treat of the article of geometry amongst the Egyptians, we hope to shew how little grounds there are for this opinion. In favour of these people we shall produce testimonies more certain and more authentic than all these reports of the Greeks, against which it is often not amiss to be upon our guard.

^a Acad. des sciences, ann. 1710, hist. p. 149.

^c See Weidler, hist. astronom. p. 64.

ARTICLE III.

Of the Greeks.

FROM what I have said, in the preceding books, of the state of the sciences amongst the Greeks, we cannot have conceived a very high idea of the capacity of these people. The epocha we are now going through, will not be much more favourable to them. Plutarch, it is true, has remarked, that, about the time of Hesiod, the sciences began to unfold themselves in Greece ^f. But the progress they made was still very slow. We can affirm, that, till the time of Thales, that is, till the year 600 before Jesus Christ, the Greeks had but very poor notions of the fundamental principles of astronomy and geometry ^g. They even availed themselves but very indifferently of the discoveries communicated to them by Thales, and his disciple Anaximander. We may judge of it by the facts I am about to relate.

To determine the length of the year, is the principal end proposed in all their observations on the motion of the stars. In the second part of this work, I have given an account of the efforts which the Greeks made to attain it. There we have seen, that for many ages these people advanced no further than to add six days to the 354 of which their year was originally composed ^h. It was regulated in this manner in the time of Solon, and also a long time after him ⁱ. These years were formed of twelve lunar months, which they supposed to consist of 30 days each. By this it appears that the Greeks had regard rather to the course of the moon, than to that of the sun. By proceeding upon this calculation, they formed neither a lunar nor a solar year ^k.

^f T. 2. p. 744.

^g See Eudem. *apud* Diog. Laert. l. 1. segm. 23.; Apuleius, florid. l. 4.

^h Book 3. c. 3. art 2. sect. 2. ⁱ See Marsh. p. 610. 611. ^k Id. *ibid*.

The disorders which such a calendar must occasion, are easy to conceive. Accordingly the Greeks were obliged at every turn to make amendments, by correcting either the months, or the years. They cut off from the month, sometimes one day, sometimes two¹. It happened besides, that after a certain time their twelve lunar months no longer answered to the four seasons of the year. To salve this, the Greeks added a thirteenth; but circumstances also occurred which obliged them to omit this intercalary month*. Thus they were always under a necessity of inventing new expedients.

To the little progress which astronomy had made in Greece, we ought to attribute that number of different periods of which I have given account in the second part of this work. Religion had given birth to them in a great measure. Most of these cycles had been invented only to adapt the celebration of the feasts to the times prescribed by the oracles. But we may say of these periods, that they give us no more advantageous idea of the people who invented them, than do the festivals for which they were instituted.

It is very astonishing that the Greeks should have been so many ages without discovering the imperfections of their calendar, and the confusion they were thrown into by the method they pursued. It is agreed, that Thales understood the year consisting of 365 days^m. Posterior to this philosopher, Plato and Eudoxus learned in Egypt, that the sun employs in his revolution, not only 365 days, but also near six hoursⁿ. Nevertheless, in the time of Demetrius Phalereus, the year of the Greeks still consisted of no more than 360 days^o. They had had it however a long

¹ Cicero in Verrem, act. 2. §. 2. n. 52. t. 4. p. 244.

* We see, that in the time of Herodotus the Greeks were in use of adding a thirteenth month after two complete years, that is to say, at the beginning of every third year, l. 2. n. 4. But as, by this method, their years became too long by a month at the end of eight years, every eighth year they omitted an intercalary month. Censorin. c. 18.

^m Diog. Laert. l. 1. §. 27. ⁿ Strabo, l. 17. p. 1160 1161.

^o Plin. l. 34. sect. 12. ; Varro apud Nonium. Demetrius Phalereus flourished about the year 300 before Jesus Christ.

time in their power, as we have seen, to have regulated the length of it, in a manner more analogous to that of the sun's revolution. We cannot conceive from what motives the Greeks should so long have persisted in keeping a form of year so defective as that we have been speaking of. Their most sensible writers have passed this judgment on it; and Herodotus, speaking of the year of the Egyptians, could not help remarking that their method was much wiser than that of the Grecians^p. Accordingly we see, that the best astronomers of Greece, such as Cleostratus, Harpalus, Nauteles, Mnesistratus, Dositheus, Eudoxus, Meton, Callipus, &c. were obliged many times to change the rules of intercalation, and successively to invent different periods, the better to make their months agree with the course of the moon, and their years with that of the sun^q.

The manner in which the Greeks reckoned and named the days of their months, appears to me no less singular and fantastical than the form of their calendar.

The Greeks divided the month into three parts, each of ten days. The first ten was called "the ten of the month beginning^{*}"; the second, that of the "month which is in the middle[†]"; and the third, that of the "month concluding[‡]". The first ten was counted progressively; thus they said the first, second, third, &c. of the month beginning. But as the Greeks never counted the day of the month higher than ten, when they would express, for example, the 16th, they said the second sixth; that is to say, the sixth day of the second ten. In like manner, for the third ten, instead of saying the 24th, for instance, they said the third fourth. Such was still the Grecian manner of reckoning in the time of Hesiod^r.

Solon introduced some change in the appellation of the days of the third portion of the month. He brought up the custom of counting from the twentieth day to

^p L. 2. n. 4. ^q See Marsham, p. 614. et seq.

^{*} Μηνὸς ἰσμενεύς. [†] Μηνὸς μεσσηντος. [‡] Μηνὸς φθινοντος.

^r Dies, v. 814. et seq.

the thirtieth, not by addition but by subtraction, decreasing always according to the waning of the moon. Thus instead of saying the third first, that is to say the twenty-first, he ordered, that they should say the tenth of the "month concluding;" the ninth of the "month concluding" for the 22d, and so for the rest¹. Sometimes they even suppressed the expression of the "month concluding," when they reckoned several days successively, because then it was not possible to mistake². It is not easy to conceive how a people of whom we commonly entertain so high an opinion, could follow so unnatural and extravagant a way of reckoning. The reform introduced by Solon, was still more defective than the custom of which it took place.

This oddity is remarkable even in the name which the Greeks gave the last day of their month. They regulated their months by the course of the moon; consequently, these months consisted alternately of thirty and of twenty-nine days; yet the name of the thirtieth or *triacade* was common to the last day of them both³. Thales was the first author of this custom⁴.

It must also appear very singular, that the Greeks, who derived from the Orientals a great part of the elementary knowledge of astronomy, should not have followed the custom which those nations had, from time immemorial, of dividing the week into seven days⁵. We have just seen, that the Greeks divided their months into three decads or tens, which they named, the month beginning, the month in the middle, and the month concluding. Such also was the form of their weeks. It was not till many ages after those we are now considering, that they conformed themselves to the practice of the eastern nations, and divided their week into seven days⁶.

In the ages we are now going through, the Greeks, generally speaking, had yet but extremely narrow ideas of

¹ Plut. in Solone, p. 92. C.

² Id. ibid.

³ Gemin. c. 6. p. 68.: Schol. Hesiod. dies, p. 166. &c. edit. Hensch.

⁴ Diog. Laert. l. 1. segm. 21.

⁵ See part I. b. 3. chap. 2. art. 2.

⁶ Dion Cassius, hist. Rom. l. 37. p. 42.

astronomy. It is certain, that they then knew but a very small number of the constellations^a; and it was the same with regard to the planets. Their knowledge in this article was reduced to Venus. This is the only planet made mention of in Homer and in Hesiod. It may perhaps be said, that the silence of these two poets upon Mars, Jupiter, &c. is no proof, that in their times these planets were unknown in Greece; and we might admit of this answer, were we not elsewhere acquainted with the ignorance of the Greeks upon this subject. But it is a fact not to be doubted. Democritus, by the account of Seneca, suspected that there were many wandering stars; but he did not venture to determine either the number or the course of them; for, adds Seneca, the Greeks did not yet know, that there were five planets^b. Eudoxus was the first who brought from Egypt into Greece the knowledge of these stars^c. It is then certain, that till the time of this philosopher, that is, till about the year 400 before Jesus Christ, the Greeks remained in the most profound ignorance of the nature and motion of the heavenly bodies. We may the better judge of this by the ideas which they had formed of Venus.

The lustre with which this planet shines, had struck the Greeks; but its motions had thrown this people into a very gross error. We know, that Venus appears alternately before the sun's rising and after his setting, according as she is more to the west or more to the east than the sun. The Greeks never imagining that one and the same star could appear under two such opposite aspects, thought they ought to attribute them to two different stars. In consequence of this idea, Venus amongst these people received two names, which, as they are expressive of her two opposite situations, really show that the Greeks of one planet had made two. Thus, when Venus appeared before the rising of the sun, they called her *Eosphoros*, that is to say, the herald of the morn; but when she appeared only after his setting, they

^a See part 2. b 3. chap. 3. art. 2. § 2.

^b Nat. quæst. 1. 7. cap. 3.

^c Id. *ibid.*

named

named her *Esperos*, the evening-star. Venus is never distinguished by any other than these two names in Homer and in Hesiod; and, by the by, this is a pretty clear proof, that it was very late before the Greeks thought of designing their planets by the names of the deities they adored.

Appollodorus pretends, that Pythagoras was the first who made known to these people, that the Venus of the morning and the Venus of the evening were one and the same planet^d. But, according to some other writers, this knowledge should be still more recent in Greece. They give the honour of it to Parmenides^e, posterior by about fifty years to the philosopher of Samos.

The same uncertainty reigns on the history of all the astronomical discoveries made in Greece. The epochas of them cannot be exactly marked. The ancients, for example, are divided about what time the Greeks became acquainted with the obliquity of the ecliptic. Some of them attribute this discovery to Pythagoras^f, others to Anaximander his disciple^g. There are even some who will have Oenopides of Chios to have been the first who perceived it^h. What appears most probable to me in the question is, that Anaximander was the first who showed the Greeks by how many degrees the zodiac was inclined to the equator. The manner in which Pliny has expressed himself in speaking of the discovery attributed to this philosopher, seems to favour the explication I proposeⁱ. Perhaps also before Anaximander, the learned made a mystery of that knowledge. This philosopher divulged it, and by that means facilitated to every one the means of applying to astronomy with some

^d Apud Stob. eclog. phys. l. 1. p. 55.; Plin. l. 2. sect. 6. p. 75.; Diog. Laert. l. 8. segm. 14.

^e Phavorin. apud Diog. Laert. l. 9. segm. 23.

^f Plut. t. 2. p. 888 C.; Autor libri de hist. philos. apud Galen. t. 2. c. 12. p. 35- ^g Plin. l. 2. sect. 6.

^h Diod. l. 1. p. 110.; Plut. loco cit.; Eudemus apud Fabric. B. Gr. t. 2. p. 278.

Oenopides is thought posterior by some years to Anaxagoras, whose time is well enough known through his disciple Pericles.

ⁱ Obliquitatem ejus intellexit, loco cit.

success. This opinion also may receive some authority from the expressions of Pliny *.

Neither is this the only astronomical discovery the honour of which the ancients have thought due to Anaximander. He is the first, say they, who found the art of explaining the revolutions of the sun and the equality of days and nights; that is to say, that among the Greeks his was the honour of first acquiring the knowledge of the equinoxes and solstices, and of reducing to fixed principles the regular variety of the seasons ¹. Thales, his master, had determined the setting of the Pleiades to the 25th day after the autumnal equinox. Anaximander marked it at the 29th, or even at the 31st ^m. Of all the discoveries with which this philosopher enriched the Grecian astronomy, that of sun-dials is without doubt the finest and most important. He made trial of them at Lacedæmon ⁿ. I had forgot to say, that Anaximander passed, according to Pliny, for the first of the Greeks who had undertaken to construct an artificial sphere ^o.

The history of the discoveries attributed to this philoso-

* *Rerum fores aperuisse*, loco cit.

¹ Acad. des inscript. t. 10. p. 23. 24.

^m Weidler, hist. astron. p. 76.

ⁿ Diog. Laert. l. 2. segm. 1.

Salmasius has pretended, that the instrument of which the invention is by Diogenes Laertius attributed to Anaximander, must have been very inferior to a sun-dial. If we believe him, this instrument only served to mark exactly the points of the solstices and equinoxes, the meridians and seasons. The use of this instrument, adds Salmasius, could not extend so far as to trace the course of the sun from the moment of his rising to that of his setting. But Salmasius, more commendable for the extent of his erudition, than for the justness of his criticism, assigns, contrary to his own intention, to the instrument invented by Anaximander, properties infinitely superior to those of a simple sun-dial.

Herodorus, moreover, says positively, that the Greeks had learned from the Babylonians the use of clocks, and the division of the day into twelve equal parts, l. 2. n. 109. Herodotus wrote only about 100 years after Anaximander. He does not speak of that knowledge as a novelty lately established in Greece. The authority of this great historian would, therefore, lead me to believe, that Anaximander was not, properly speaking, the inventor of sun-dials amongst the Greeks; they had learned the use of them from the Babylonians. But this philosopher may undoubtedly have brought the making of sun dials to perfection, and by that have deserved to be regarded as in some sort the inventor of them.

^o L. 7. sect. 56. p. 416.

pher, furnishes us moreover with very striking proofs of the little progress which physical astronomy had made in Greece. What can we think of the ideas which the astronomers of this country had formed at that time of the magnitude of the heavenly bodies? Anaximander did not believe the sun to be bigger than Peloponnesus^r.

I shall dwell no longer upon the knowledge which the Greeks may have acquired in astronomy in the ages which terminate this third part of our work. I believe I have said enough to enable us to set a proper value upon it. However, I shall still touch a little upon the subject, and even come down to pretty modern times, in the following article, where I propose to examine and compare the progress which the ancient nations had made in astronomy.

A R T I C L E IV.

Reflections on the astronomy of the Babylonians, Egyptians, and Grecians.

According to Pliny, three nations only are reckoned in antiquity who rendered themselves famous for their progress in astronomy; the Chaldeans, the Egyptians, and the Grecians^q. We have given account of all that the ancients have been able to furnish on the astronomical learning of the Babylonians and Egyptians. These discoveries belong to the ages in the limits of our work. From that epocha there is nothing that can be directly attributed to these people. I have more than once had occasion to shew the reasons of this. We are now therefore enabled to judge of the learning and of the discoveries of the Egyptians and of the Babylonians in astronomy.

It is not quite the same thing with the Greeks. The sciences in general had as yet, in the ages which close this

^r Plut. de placit. philos. l. 2. c. 20.; Diog. Laert. l. 2. segm. 1.

^q L. 18. sect. 57. p. 129.

third and last part of our work, made but a very indifferent progress amongst these people. We cannot therefore judge of the extent of their astronomical learning, by all that I have hitherto had occasion to say of it. But to facilitate the comparison of the various improvements in this science amongst the different nations of antiquity, I have thought proper to anticipate the times; I shall therefore indicate in few words the epocha at which astronomy began to merit the name of science in Greece. Let us first speak of the Chaldeans.

Although the Greeks have not been very careful to search into the history of the eastern nations, they did not however neglect to instruct themselves in the discoveries formerly made in those countries. Their writers say enough of them to enable us to pronounce upon the rank which the Chaldeans ought to hold amongst astronomers. We have seen by the details into which I entered on the article relating to these people, that they must have acquired a pretty extensive knowledge of the celestial motions. Their astronomical observations are the most ancient that are known in antiquity*. When Hipparchus and Ptolomy, who lived in Egypt, undertook to reform astronomy, they found in the memoirs of the Egyptians, no astronomical observations comparable for antiquity to those of the Babylonians†. In a word, the best writers of Greece have agreed, that their nation had borrowed much from the Chaldeans. These people share with the Egyptians the honour of having taught the Greeks the first principles of astronomy‡.

It is true, that the Egyptians appear to have had the preference for exactness, and for what may really be called astronomical science. It is even usual enough with us to look upon the Chaldeans rather as astrologers than as astronomers; and we pretend not to disguise, that in

* Symplic. in l. 1. Arist. de cœlo. fol. 27. in l. 2. fol. 117. verso.; Syncell. p. 207. C.; Marsham, p. 474.

† Marsham, *loc. cit.*

‡ See Herodotus, l. 2. n. 109.; Strab. l. 17. p. 1161.; Theon, ad Arati prognost. p. 80.; Syncell. p. 207. C.

many respects they do indeed deserve this reproach. But it must be observed at the same time, that the Chaldeans were not the only people infatuated with the chimæras of astrology. There is no nation of antiquity who have not given into them; neither have the Egyptians been more exempted than others^u. Besides, we have already observed, that astrology must have been of very great service to astronomy^x. The study of this frivolous and ridiculous science, should not therefore in this respect be a reproach to the Chaldeans.

Ought we not rather to attribute the pre-eminence which the Egyptians possess over all the nations of antiquity, to the partiality and prejudices of the Greeks? From them we derive all that we can know of the state of the sciences amongst ancient nations. Most of the great settlements in Greece were formed by colonies sent from Egypt; and the Greeks receiving their first instructions in the school of the Egyptians, naturally regarded them as the inventors of all the sciences. In time they sought to exalt this opinion, and in this view almost all their writers have spoke of it. However, this preference has had no other cause or foundation, than the high esteem with which the Greeks were possessed for a nation from whom they derived almost all their learning. It was very late, on the other hand, that these same Greeks became acquainted with the nations of the Higher Asia, and being then enriched by their own proper funds, they needed to borrow little or nothing from strangers. It is not therefore surprising that their historians should have neglected to expatiate upon the discoveries of the Chaldeans; they took not the same interest in them as they did in those of the Egyptians.

What we have here said is not intended to contest with

^u Herod. l. 2. n. 82.; Diod. l. 1. p. 91. 92.; Cicero. de divin. l. 1. n. 1. t. 3. p. 4.; Plut. conviv. sap. p. 142. A.

^x Part I. b. 3. c. 11. art. 2. I repent bitterly, said Kepler, the having so much decried astrology. I remark, that the study of astronomy has been greatly neglected ever since men ceased to apply themselves to astrology.

the Egyptians the merit of having made many discoveries in astronomy: far from such a thought, we have forgot nothing that might render to these people all the justice which is due to them; but we must not suffer the bad example of the Greeks to prejudice and impose upon us. Let us not exalt the Egyptians too highly at the expense of the Chaldeans. I do not think the one much more learned than the other *.

As for the Greeks, we cannot deny but that they made a great progress in astronomy; but then that progress was very slow. I even doubt whether, without the repeated helps of the Egyptians and Babylonians, that science would ever have risen in Greece beyond the most ordinary and limited experiments ^y. Those of the Grecian philosophers who began to make known to their nation the principles and rules of astronomy, had travelled for them into Egypt and into Chaldea. If Thales has foretold an eclipse, it was not the fruit of his own proper discoveries, nor of the labours of the Grecian astronomers who preceded him; from them he had no assistance to expect. Thales can certainly have foretold that eclipse only by means of some method, some set of rules that he had learned from the Egyptians ^z.

Herodotus is the most ancient author who has spoken of that eclipse foretold by Thales. We may conjecture, that he intended to speak of an eclipse of the sun which happened at the time the Medes and Lydians were engaged

* As far as I can judge, the Chaldeans and Egyptians knew little more of astronomy than the Peruvians, Mexicans, and Chinese.

^y See Strabo, l. 17. p. 1161.

^z See Weidler, hist. astron. p. 71. We may very well compare the knowledge which Thales and the other philosophers of his time had in astronomy to that of the Indian bramins at this day. The bramins have the tables of the ancient astronomers to calculate eclipses, and they know how to make use of them. But though they do foretel eclipses by this means, we are not thence to conclude that they are very skilful in astronomy. All their science consists in a pure mechanism, and in some arithmetical operations. They are absolutely ignorant of the theory of astronomy, and have no knowledge of the mutual relation and dependence of the different parts of that science. Lettr. édif. t. 10. p. 36. and 37.

in battle. I say conjecture; for surely the manner in which Herodotus speaks of that phænomenon is very singular. He says, that in the time when the two armies were engaged, the night suddenly took place of the day ^a. Thales, adds he, had foretold this event to the Ionians, and had laid down to them nearly the year in which should take place "this change of day into night." These are his terms ^b; and we may infer from them, that in the time of Herodotus the Greeks comprehended not, nor knew any thing of eclipses. We even see that there was not at that time in the Greek language any term to express these phænomena. Herodotus would certainly have made use of it, and not had recourse to a periphrasis to signify an eclipse which separated the Medes and the Lydians.

It appears certain, by the consent of all antiquity, that, before the voyage of Plato and Eudoxus into Egypt, the Greeks had no idea of what may be called astronomical science. They were ignorant of the true duration of the solar year ^c, knew nothing of the planets ^d, had no idea of eclipses, and in a word conceived but in a very confused manner the revolutions and motions of the heavenly bodies. Till the time of Alexander these people had made no discovery comparable to those of the Egyptians and Babylonians. The Greeks excelled at that time in the fine arts, their laws were wise; but they had given little application to the speculative sciences, such as astronomy, geometry, physic, &c.

The event which, after the death of Alexander, placed the Ptolomys upon the throne of Egypt, occasioned the Greeks to make more progress in astronomy in one age, than they had hitherto done in near two thousand years. Being now in a better situation than ever for profiting by the lights and discoveries of the Egyptians, they were not long of availing themselves of them in the most advantageous

^a L. i. n. 74.

^b Id. *ibid.*

^c Strabo, l. 17. p. 1161.

^d See above, p. 116.

manner- Greece victorious and enriched by the spoils of conquered Egypt, very soon surpassed her masters. But are we not authorised to refer in some sort to the Egyptians, the greater part of the discoveries with which the Greeks have honoured their philosophers? In effect, it is certain, that the most famous astronomers in which Greece glories, Aristillus, Thimochares, Hipparchus, Ptolomy, &c. were bred in the school of Alexandria. They it was who began to give the Greeks some knowledge of the proper motion of the fixed stars^e. Hipparchus was the first who undertook to make a catalogue of these stars^f. We may judge from these facts of the state of astronomy in Greece before the Ptolomys; that is to say, two hundred years before Jesus Christ. Shall we give the name of science to the poor notions which till this time the Greeks had had of the celestial phænomena?

We shall finish what concerns the state of astronomy amongst the ancients, by some reflections upon the difficulties that attended the study of that science in remote times. The instruments which the ancient astronomers made use of, must have been extremely defective and imperfect. They had not the use of pendulums, so convenient, or rather so necessary for making observations; neither were they acquainted with telescopes. Logarithms, which now spare us so many multiplications and divisions, were equally unknown to them. In what laborious and enormous calculations must not the problems of astronomy have engaged these ancient observers? The arithmetical characters were another increase of trouble and perplexity. They had not the use of the numerical figures of the Arabians, so commodious for all operations in numbers. Anciently

^e See Weidler, hist. astron. p. 124.

^f Plin. l. 2. sect. 24. The judgment which Pliny passes on that enterprise of Hipparchus, always appeared singular to me. These are the terms he employs to characterise it: *Idemque (Hipparchus) ausus rem, etiam Deo improbam, annumerare posteris, stellas, et sidera ad nomen exungere*. Yet without such a catalogue we do not conceive how there could exist a science really worthy the name of astronomy.

arithmetical

arithmetical operations were executed by means of little stones, which they ranged upon tables made on purpose *; and to write down the sum of these calculations the ancients had no other numerical signs, than the letters of their alphabet. To determine eclipses by such means, the process was more tedious and more difficult, than if we should now-a-days undertake to calculate them with counters, and write the amount in Roman figures.

I had almost forgot to make one observation, which, however, I think essential in the examination of the astronomical learning of ancient nations. Some philosophers of antiquity appear at first sight to have had a glimpse of some of those shining truths which are the boast of modern ages. Certain authors have thought fit in consequence to advance, that the ancients knew much more of them than we should naturally be led to believe. But when we reflect attentively on these pretended discoveries, we very soon perceive, that all which we read on this subject in the writings of the ancients, ought to be regarded as mere ideas advanced at random, without knowledge, without principles, and without any kind of foundation. If some of the ancients, for example, have said that the earth was a spheroid, flattened at the poles; that it revolved round the sun; that the comets were planets, whose periodical revolutions were completed in a certain number of ages; that the moon might be habitable; that that planet was the occasional cause of the flux and reflux of the sea, &c. ‡, we ought not to regard these propositions in their mouth, as the effect and the result of the knowledge which these philosophers had acquired. On the contrary, we ought to place them on the footing of these hypotheses which an uncertain and ill-regulated imagination daily produces. I say so, because none of the ancient philosophers have been able to give reasons for what they deli-

* See the epigram of the second book of the Anthology, which begins with these words, Καλλιγενής ἀγροίκος.

‡ See *supra*, art. 1. & 2. p. 104. & 105.

vered ; which we may be easily convinced of, by reading the manner in which the writers of antiquity relate the opinions of their learned. There we see that the ancients had no reasons preponderating to adopt one system rather than another ; neither were they ever able to give any of them the slightest demonstration^a. For the rest, I do not pretend to make this a matter of reproach to the ancients. They were destitute of all helps proper to acquire these branches of knowledge. If, nevertheless, they have sometimes hit upon the truth, we ought to attribute it to pure chance ; and be sensible, that, as they wavered in uncertainty, and ran through all possible combinations, it is not astonishing that they should hit upon the true one, because the number of these sorts of combinations is not infinite. In this respect consists the characteristical difference between the astronomical learning of the ancients, and that of the moderns. What at this time we affirm of the figure of the earth, of the system of the heavens, of the cause of the flux and reflux of the sea, &c. is not the effect of chance and imagination ; it is the result of much observation, experience, and reflection, and every astronomer is able to support by reasons the system which he has thought fit to embrace.

C H A P. III.

Geometry and Mechanics.

I Have reserved for this last part, the few details I intend to enter into upon the state of geometry and mechanics. Amongst the Babylonians, and amongst the Egyptians, we must not expect a great insight into the discoveries made by these people in the different branches which compose these two sciences. All the literary monuments of the an-

^a See *supra*, art. 2. p. 104. & 105.

cient eastern nations are abolished *. None of their writers has escaped the injuries of time. Those even of Greece, the only ones which could now inform us of the sciences cultivated by the Babylonians and Egyptians, give us but very little light into this subject. Nevertheless I do not think we are absolutely incapable of forming a general estimate of the knowledge which the Babylonians and Egyptians might have of the mathematical sciences. By conjectures, and by inferences drawn from what history has transmitted to us upon the monuments of Chaldea and Egypt, we may form a pretty just idea of the progress which the mathematics had made in these countries.

ARTICLE I.

Of the Babylonians.

IT is certain that the Babylonians were among the first who cultivated geometry, as is, I think, sufficiently proved by the testimonies I have produced in the first part of this workⁱ. What we read in ancient authors, of the immense works which had rendered Babylon one of the wonders of the world, cannot but give us very high ideas of the proficiency of its inhabitants in mechanics; and it is not possible to carry mechanics to a certain degree of perfection, without the help of geometry. This science must therefore have been familiar to the Babylonians. To evince this, I shall take a review of some of the works executed by these people. I have already spoke of them in the preceding book; but I passed slightly over some of them, designing to treat of them more fully in this place, be-

* Those of the Chinese excepted, which are extremely confused, of no ancient date, and which give us no certain particulars relating to the early times. See at the end of this volume, our dissertation upon the antiquities of the Egyptians, Babylonians, Chinese, &c.

ⁱ Book 3. chap. 2.

cause these works have a direct relation with the mathematics.

Babylonia, in the ages I am now speaking of, enjoyed a very great fertility. An advantage, nevertheless, which they owed more to art than to nature. It rains but very seldom in these countries; and the lands being watered only by the Euphrates^k, that river, in former times, made them pay very dear for its favours. The snows of the mountains of Armenia, which always melt at the approaches of summer, never fail to cause the Euphrates to overflow its banks. These violent floods laid, in the early times, all the lands of Babylon under water, during the months of June, July, and August^l. To remedy these inundations, they drew two canals above that city, which carried off the overflow of waters into the Tigris before they reached Babylon^m, and in order to secure the country still better, they thought of means to confine the Euphrates within its banks. To effect this, they built on each side of this river, a very high dyke, and of great extent, lined with bricks cemented with bitumenⁿ. They carried their precaution still further. The Euphrates might happen to swell so considerably as to surmount these dykes; with a view to prevent this disorder, they had contrived all along them proper openings to give the water a free and necessary vent^o.

The Euphrates traversed Babylon from north to south. I have already given a description of the bridge built over this river in the preceding book; and this bridge, if we

^k Arrian. de expedit. Alex. l. 7. p. 454.

^l Strabo, l. 16. p. 1075.; Plin. l. 5. sect. 21. p. 269.

^m Id. ibid.; Herodot. l. 1. n. 185.; Megasthen. ex Abyden. apud Euseb. præp. evang. l. 9. c. 41. p. 457. The principal of those canals seems to have been the *Naharmalcha*, named by the Greeks *Βασιλέως Ποταμός*, the *Royal River*. See Strabo, l. 16. p. 1084. not. 2. This canal, which the ancients speak of as an immense work, can now scarce be distinguished from the other canals with which this country is intersected.

ⁿ Herod. l. 1. n. 185.; Q. Curt. l. 5. c. 1. p. 313.

^o Q. Curt. *loco cit.* We see such openings on the bank of the Loire. They are called *Dischargeurs*.

believe

believe Herodotus, was not all. That historian pretends, that they had run a secret gallery beneath the bed of the Euphrates above 20 feet high, and 15 broad. It served for a communication between the two palaces built facing each other, on the opposite sides of the Euphrates^a.

These works could not have been executed without first turning off the course of the Euphrates. They effected it, not only by making many drains from that river, but also by digging above Babylon an immense basin to receive a part of its waters. When all the works which they had undertaken were finished, they caused the Euphrates to resume its ordinary bed; but the basin of which I have been speaking, was suffered to remain. It was lined throughout with stone, and communicated with the river by a canal^b. This vast reservoir was designed for two uses. To receive a great part of the overflowing waters of the Euphrates in the time of inundations, and to preserve them for the purpose of watering the grounds in convenient seasons; for, by means of sluices, they drew off, at all times, the quantity of water they judged necessary*. In a word, the lake of Babylon served for the same uses as the lake Mœris in Egypt. For the rest, we cannot ascertain the dimensions of it; what we read in the ancients on the subject is greatly exaggerated, and they even differ from each other†.

The labours of the Babylonians to meliorate their country, were not limited to this single enterprise. They had also contrived a number of other canals, and found the secret of

^a L. 2, p. 121.

^b Herod. l. 1. n. 193.; Strabo, l. 16. p. 1075.; Arrian, de expedit. Alex. l. 7. p. 454.

* This is what may be conjectured from the relation of Herodotus, l. 1. n. 186. See also Arrian de expedit. Alex. l. 7. p. 454.; Megasthen. apud Euseb. præp. evang. l. 9. cap. 41. p. 457. C.

† Herodotus, Megasthenes, and Diodorus, are the only authors who have spoke of the extent and depth of the lake of Babylon. As to Herodotus, I take the text of this author to be interpolated and mutilated at the same time in the passage here in question. For Megasthenes and Diodorus, one of them gives the lake of Babylon above 50 leagues of circumference, and about 120 feet of depth; the other, adopting the same measure for the circumference, gives this lake only 35 feet of depth.

spreading the Euphrates through their lands, in the same manner as the Nile was formerly distributed in Egypt¹. They even proposed many advantages from digging these canals, independent of those I have shown. In the first place, they sought to diminish the impetuosity of the Euphrates, by making that river take many turns; and in the second, to render the access to Babylon difficult by water².

All these enterprises do not permit us to doubt, but that the demonstrative sciences were pretty well cultivated amongst the Babylonians. A people who had skill enough to level, to direct and restrain such a river as the Euphrates, must have made some progress in geometry and mechanics. Let us add to this what I have said of their astronomical discoveries. After these reflections, I think it will be difficult to refuse the Babylonians a pretty extensive knowledge of the mathematics.

A R T I C L E II.

Of the Egyptians.

TO give some idea of the knowledge which the Egyptians had of mechanics and geometry, I shall employ the same method that I have just made use of in regard to the Babylonians. At this time, we can no longer judge of the progress which these people had made in the mathematics, by any thing but their undertakings and their monuments. But these testimonies abundantly supply, as I have said, all that we may have lost of the writings of antiquity, as a little attention will convince us. In the preceding books, I have given account of the works which the Egyptians had undertaken and executed to fertilise their country, and draw all possible benefit from the Nile¹. I have also spoke of their obelisks, and above all of the py-

¹ Herod. l. 1. n. 193.; Strabo, l. 16. p. 1075.; Arrian. de expedit. Alex. l. 7. p. 451.

² Herod. loco citat.

¹ See part 2. book 2. ch. 1.

ramids. The reader may recollect the details into which I entered upon the construction of these grand works^m. These enterprises may, in my opinion, be cited as the clearest proof of the progress which the Egyptians had made in the mathematics. I do not speak of their astronomical discoveries. The inference I might draw from them, is plain enough.

Yet some have attempted to dispute these people the merit of having made any considerable progress in geometry, and some modern writers have even made use of this argument as a proof, that the astronomical skill of the Egyptians must have been but very indifferentⁿ. But what have been the motives for an accusation so unjust and so ill founded? They are the geometrical discoveries of which antiquity has given the honour to Thales and to Pythagoras^o. Thales, say they, is the first who discovered that a triangle which has the diameter of a circle for its base, and whose sides meet in the circumference, is necessarily rectangular^p. He also found the secret of measuring the pyramids by the shadow of the sun^q. Pythagoras, say the same authors, first demonstrated, that the square of the hypotenuse is equal to the squares of both the other sides^r. If these propositions, which, simple as they are, are notwithstanding very essential and very important, were unknown to the Egyptians; what ought we to think, conclude the critics I am speaking of, of the skill of these people in geometry^s?

I own I am yet to conceive how it has been possible to interpret the facts just mentioned to the disadvantage of the Egyptians. They appear to me, on the contrary, to prove, that geometry is indebted to this people for the discoveries

^m See part 2. book 2. *et supra*, book 2. ch. 2. p. 63. *et seq.*

ⁿ Weidler, *hist. astron.* p. 64. n. 21.; *Universal History* translated from the English, t. 1. p. 396. 397.

^o *Id. ibid.* ^p *Diog. Laert.* l. 5. *segm.* 27.

^q *Id. ibid.*; *Plin.* l. 36. *sect.* 17.; *Plut.* t. 2. p. 147.

^r *Diog. Laert.* l. 3. *segm.* 12. *et complures alii.*

^s Weidler, *hist. astron.* p. 64.

The authors of the *Universal History* composed in England, t. 1. p. 396. See 397.

in question. In effect, is it not certain, by the unanimous testimony of antiquity, that Thales and Pythagoras acquired all their knowledge amongst the Egyptians? These two philosophers had lived in Egypt a great number of years¹, and had contracted intimate friendships with the priests of this country. Pythagoras had even procured himself to be initiated², and had purchased this privilege by undergoing the necessary circumcision³. The manner in which Diogenes Laertius expresses himself in regard to Thales particularly, does not permit us to doubt, that this philosopher owed all he knew of mathematics to the Egyptians. This historian says in express terms, that Thales had never any other masters for the sciences, than the priests of Egypt⁴; and he specially names geometry⁵. I therefore take it as demonstrated, that Thales and Pythagoras derived from the Egyptians, the knowledge of the geometrical theorems we have been speaking of. If the writers of Greece and Rome have represented these two philosophers as the first who discovered them, we must not suffer their expressions to lead us into a mistake: all that is meant by them is, that Thales and Pythagoras were the first who published them in Greece; but the honour of them is incontestably due to the Egyptians.

In fine, how shall we persuade ourselves, that a people capable of raising such monuments as Egypt presents us at this day, should have been guided by mere practice, destitute of principles and of the helps of geometry? Is it not evident, on the contrary, that they knew how to apply the mathematics to the various necessities of civil life? How could they have been able, without the help of geometry, to level almost all the continent of Egypt, to draw from the Nile, that multitude of canals with which their lands were formerly watered, to hew in the mountains those obelisks, and those

¹ Plato.; Plut. t. 2. p. 875. E.; Jamblich. de vita Pythag. segm. 7. 8.; Minut. Felix, p. III.; Clem. Alex. Strom. l. 1. p. 354.

² Jamblich. de vita Pythag. segm. 14.

³ Clem. Alex. Strom. l. 1. p. 354.

⁴ L. 1. segm. 27.

⁵ Ibid. segm. 24.

colossal statues, the number of which is said to be so considerable, to transport and rear them upon their bases? I repeat it, geometry must have directed these grand operations, and the Egyptians certainly joined theory to practice. Without such knowledge, mechanics can never reach a certain degree of perfection *.

In this place, I think it will not be amiss to remark in what branch of the mathematical sciences the ancients were persuaded, each people particularly excelled; which we may easily know by the kind of science they assigned to a nation by way of preference. They looked upon the Chaldeans as the inventors of astronomy; the Phœnicians, of arithmetic; the Egyptians, of geometry, and in general of the mathematics^a. Of consequence, the ancients were persuaded, that each of these nations had carried the branch of the mathematical sciences I have mentioned, to a higher degree of perfection than the others. We become very sensible, that this was the notion of the ancients when we read the life of Pythagoras wrote by Porphyrius. He says, that this philosopher learned astronomy from the Chaldeans, arithmetic from the Phœnicians, and geometry from the Egyptians^b. This choice is not made at random. He vouches the opinion of the ancients as to what branch of the sciences each nation was thought particularly to excel in.

I close this examination of the progress of the ancient

* It may perhaps be objected to me what I have said above, book 2. c. 2. p. 73. not. *, on the subject of the Peruvians, who, without any knowledge of mechanics, executed some works at least as considerable as those of the Egyptians. To this I answer, that this example is not absolutely conclusive against the Egyptians. In effect, independently of their edifices, history tells us, that the most ancient geometers of Greece had drawn from Egypt the first principles of their science. — The example of the Chinese may also be brought against me, and perhaps with more reason. They, when the Europeans became acquainted with them, had only the first elements of geometry, though they had studied astronomy for a long time. But still I answer, that these examples cannot be conclusive against the Egyptians, since the Greek historians acknowledge them for the inventors of geometry.

^a Jamblich. de vita Pythag. c. 29. p. 134. & 135.; Porphyr. ibid. p. 8. & 9.; Julian. apud Cyrill. l. 5.

^b In vita Pythag. p. 8. & 9.

nations in the demonstrative sciences, by a reflection on the characteristical difference of genius of the Greeks, and of the Orientals. The Assyrians, the Babylonians, the Phœnicians, and the Egyptians, owed only to themselves the discoveries they made in the sciences. These people travelled little; neither does it appear, that they were polished by colonies sent from foreign countries. It was not thus with the Greeks; notwithstanding their pride and their prejudice, they have been obliged to acknowledge, that they were indebted for all their knowledge to the Egyptians, to the Chaldeans, and to the Phœnicians. Greece, by the confession of her best writers, had no other merit than that of perfecting the discoveries communicated to them by Asia and by Egypt^c. The Greeks then, and consequently the Romans, owed all their lights to the very same people, whom, in succeeding ages, they had the ingratitude, not to say the insolence, to call barbarians.

A R T I C L E III.

Of the Greeks.

I Shall enter into no detail upon the state of geometry amongst the Greeks in the ages which employ us at present. I could not do it without repeating what I have already said in the preceding article upon the discoveries attributed to Thales and Pythagoras. In effect, these two philosophers were regarded in antiquity as the first who gave the Greeks some notions of geometry. We may therefore judge of the progress of that science in Greece, by the discoveries with which antiquity has honoured Thales and Pythagoras.

It has been the same with the sciences in Greece as with the arts. Amongst the different nations comprised under the general name of Greeks, those who inhabited Asia were the first amongst whom the demonstrative sciences began to be perfected. Thales was of Ionia. We see also, that,

^c Diod. l. 5. p. 376.

in the different countries of Asia Minor, appeared the first and most illustrious writers who have merited the attention of posterity. I have said it already, Greece in Europe was polished much later than Greece in Asia. This is a fact which it is needless to prove.

C H A P. IV.

Geography.

I Have spoke, in the second part of this work, of the progress which the conquests of Sesostris had occasioned to be made in geography^a. There we have seen, that this prince caused maps to be drawn of all the countries he passed through, and that he took care to disperse copies of them in many countries^c. I proceeded to give an account of the maritime enterprises of the Phœnicians, of the voyage of the Argonauts to Colchis, of the expedition of the Greeks before Troy, and of some other facts which must certainly have greatly contributed to the progress of geography^f.

It appears, that this science continued constantly during a certain time to enrich itself more and more. The ages we are now going through, were, proportion considered, very knowing in geography. We see, by the writings of Homer, that the Indies excepted, and some of the northern parts of Europe, this poet knew almost all the countries mentioned by ancient geographers^g. He seems even not to have been ignorant, that the earth was surrounded by water on all sides^h. Without doubt, this opinion was in a great measure founded only on conjecture. Many travellers informed them, that having advanced towards different extremities of the globe, they always found them bounded by a sea; and they concluded, that, in all appearance, it must

^a Book 3. c. 2. art. 3.^f Ibid.^g See Ibid. book 4.^h See Strabo, l. 1. *init*.ⁱ See the Iliad, l. 18. v. 606. 607.

be the same on all other sides * I shall allow, that Homer has spoke of the ocean in a manner very obscure, often even contradictory and ridiculous: nevertheless, through all these clouds, we can discern, that in his time they believed our globe to be exactly surrounded by water.

We might also surmise, that this poet had some ideas, some confused notions of the temperature of the climates situated under the equator. The description which he makes of the fruit-trees of the gardens of Alcinous, gives me room to propose this conjecture. Homer says, that these trees are never without fruit; that in the time that the first are ripening, new ones are forming. The pear ready for plucking, shows another just appearing. The pomegranate and the orange have already attained their perfection, at the same time we see others advancing towards it. The grape is pushed off by another grape, and the falling fig gives place to another which follows it †. This picture is perfectly agreeable to the manner that trees produce their fruit under the equator. Is it a fiction purely poetical, or can it be founded upon the knowledge which Homer might have had of the reality of the fact he advances? I should be pretty much inclined to the latter opinion.

They might have had some ideas of the temperature of the climates situated beneath the equator, before the age in which Homer composed the *Odysey*. I have said, in the second part of this work, that the Phoenicians had made establishments on the western coasts of Africa, not long after the Trojan war ‡. As these people were very bold and extremely enterprising, nothing hinders us from believing that some of their navigators might have penetrated as far as under the line. Thus, even before the age of Homer, they might have been acquainted with the climates situated beneath the equator. It is easy, moreover, to indicate another source.

* Strabo himself could not affirm, that the earth was surrounded by water, but in the same manner, that is to say, by strong conjectures supported by some relations which gave this opinion a kind of evidence.

† *Odyss.* l. 7. v. 117. &c. ‡ Book 4. ch. 2.

The scripture speaks of the frequent voyages made by the fleets of Solomon to the land of Ophir and Tharshish, under the conduct of the Phœnicians¹. We are at this time greatly divided upon the situation of the countries designed by antiquity under these names: in effect, it is scarce possible to ascertain it to demonstration. All we know positively is, that these countries must have been at a good distance from Elath and from Ezion-geber, ports of the Red sea, from whence the fleets of Solomon departed; they took three years to perform their voyage. We know, moreover, that they returned laden with gold and silver, gums, rosin, odoriferous woods, precious stones, elephant's teeth, and even apes and peacocks^m. All these circumstances lead me to presume, that we ought to look for Ophir and Tharshish in Africa. I shall therefore side with those who place these countries in the kingdom of Sofala, on the eastern coast of Ethiopia: there we find all the different productions I have here mentioned. It appears, moreover, that this navigation must have been familiar to the Phœnicians from before the time of Solomonⁿ. We are not ignorant, that to go from the Red sea to Sofala, the line must be passed. Thus Homer, who was posterior to Solomon by about an hundred years, may have been very well informed of the temperature of the climate situated under the equator.

Of all the facts I have hitherto spoke of, there are none more remarkable than the maritime enterprise executed by the orders of Nechos, King of Egypt, about the year 610 before J. C. This prince sent from the borders of the Red sea, a fleet conducted by the Phœnicians, with orders to keep always along the coast of Africa, to make the tour of them, and to return to Egypt, by entering the Mediterranean at the pillars of Hercules; that is to say, by the straits of Cadiz or Gibraltar. He was obeyed. The Phœnicians, on coming out of the Red sea, entered into the southern ocean, and constantly followed the coasts. When autumn was come, they landed, sowed grain, waited the ripening, and having got in their harvest they embarked

¹ 1 Kings c. 9. v. 26. cap. 10. v. 11. 22.

^m 1 Kings c. 10. v. 11. 22.

ⁿ Ibid. c. 9. v. 27.

again. These navigators employed two years in coasting Africa in this manner, to arrive at the pillars of Hercules; arrived at this strait, they passed it, entered the Mediterranean, and reached the mouths of the Nile the third year of their course^o.

History furnishes us with no further facts, which we can make use of with relation to geography. Let us now consider the state of that science in its mathematical part, and try to discover the progress which may have been made in it in the ages which close this last part of our work.

I think that what constitutes the essence and the scientific part of geography was then little known. Astronomy and geometry furnish lights which are necessary for that science, and I doubt whether they as yet knew how to apply them to the purpose. They were acquainted with many countries by the relations of travellers; but they judged of their positions and of their respective distances in a very vague and uncertain manner, and they were by no means in a condition to determine them with any sort of precision. The very ideas that they had of the figure of the earth, favour but too much of the ignorance of these little enlightened ages, in the mathematical part of geography. In the time of Homer they looked upon our globe as a flat surface, surrounded on all sides with water^p. I have already said more than once, that this poet probably passed his life in different countries of Asia Minor; and it cannot be denied that, for his time, he was very learned. His ideas of the figure of the earth might therefore be at that time the general opinion of the people of these countries. Even in the time of Herodotus this error was not yet well eradicated. He laughed at the authors, who, describing the circuit of the earth, represented it round, as if, says he, they had turned it on a wheel. These are his terms^q.

As to the Greeks of Europe, we do not find, that, be-

^o Herod. l. 4. n. 42.

^p Iliad. l. 18. v. 626. 627.; Gemin. c. 13. p. 54.; Macrobian. in somn. Scip. l. 2. c. 9. p. 151.

^q L. 4. n. 36.

fore Anaximander, any one of them attempted to perfect geography by the assistance of astronomy and geometry. In effect, the disciple of Thales passed for the first of the Greeks who had found the art of drawing maps^r. But what shall we think of these geographical productions, if it be true, as is assured, that Anaximander imagined the earth to be made like a cylinder^s? Pythagoras passed for the first who thought of dividing the terrestrial globe into five zones in imitation of the celestial^t.

Be that as it will, the ignorance of the European Greeks in geography was extreme in all respects during many ages. They do not even appear to have known the discoveries made in the ancient voyages I have spoke of above. They were not absolutely unknown to Homer; I think I have shown that some very sensible traces of them existed in his poems: but these notions did not penetrate or receive credit amongst the Greeks of Europe till very late. The historical part of geography was much more defective amongst them, in the ages posterior to Homer, than in those in which this great poet lived. The facts I am about to lay before my readers do not permit us to doubt of it. It is true, they are foreign to the epocha which I have prescribed myself; but I hope to be pardoned this digression, the rather as it will serve to prove how uncertain and imperfect was the knowledge of the ancients.

Herodotus, who was posterior to Homer by at least 400 years, did not believe that the sea surrounded the earth. "I cannot help laughing," says he, "at those who pretend that the ocean flows round our continent. No proof can be given of it". I believe," adds he, "elsewhere, that Homer had taken what he delivers about the ocean, from some work of antiquity; but it was without comprehending any thing of the matter, repeating what he had read, without well understanding what he he had read^x."

^r Strabo, l. 1. p. 13.

^s Plut. t. 2. p. 895. D. Anaximenes, Leucippus, and Democritus had no juster ideas of the figure of the terrestrial globe. Ibid.

^t Plut. ibid. p. 896. B.

^u L. 4. n. 8. 36. 45.

^x L. 2. n. 23.

The same Herodotus, speaking of the voyage round Africa, undertaken by the order of Nechos, does all in his power to make the relation he had heard of it appear suspicious. Those circumstances which at this time are the most capable of attesting the truth of it, are by him regarded as fabulous. He could not, for example, imagine that these navigators had seen, as they said, the sun in a contrary position to that in which he is seen in Europe^y. In general, the manner in which this author, otherwise so learned and so judicious, explains himself upon this voyage, gives us plainly enough to understand, that he comprehended neither the end nor direction of it^z. Herodotus, however, was born in Asia Minor; but, according to all appearances, he left it early, and passed his youth, and even the greatest part of his life, in European Greece.

Let us produce proofs still more astonishing of the incapacity of the European Greeks in geography, in the ages posterior to Homer. At the time when Xerxes attempted to subdue Greece, there arrived in Europe deputies from Ionia, demanding assistance to deliver their country from the dominion of the Persians. These deputies went to Ægina, where the naval forces of Greece were then assembled. They laid open the subject of their embassy, and prayed, that the fleet might advance towards Ionia: but their demand was rejected. The Greeks never dared to pass the island of Delos. They were hindered by two reasons: First, they were ignorant of the course they were to hold beyond Delos to reach Ionia. In the second place, they were afraid of undertaking such a voyage, being persuaded that it was as far from Ægina to Samos, as from Ægina to the pillars of Hercules^a. This last motive shows

^y L. 4. n. 42. The Phœnicians affirmed, that, in one part of their course, they had seen the sun on their right. To understand how that circumstance could shock Herodotus, it must be known that the ancients call the west the fore part; the east the hinder part; the north the right, and the south the left of the world. Their reason for this was, that the apparent motion of the heavens being from east to west, the west was of consequence taken for the foremost part of the world.

^z See l. 4. n. 42.

^a Herod. l. 8. n. 132.

how grossly ignorant they were in geography; and we must observe, that in this fleet was assembled the flower of all the maritime forces of European Greece.

It is not to be doubted but the Greeks, in succeeding times, applied themselves to acquire more just and exact notions of the position and respective distances of places. Geography was certainly improved, particularly after the conquests of Alexander. But in former times all the knowledge with which this science could enrich itself, was still imperfect. In the flourishing days of Greece and Rome, that is to say, in ages which in many respects may be looked upon as very enlightened, all that was known of the earth, took up upon the maps a space twice as long as broad^b; because they had no idea of the countries situated beyond the line. The space I speak of comprehended about two thirds of Europe, one third of Africa, and nearly a fourth of Asia. At that time therefore they knew only that part of the earth which lies beneath the northern temperate zone, and they were still far enough from knowing exactly all the countries situated beneath that zone.

As to the ideas which the learned had formed of the rest of our globe, they were very little rational. Most of them were persuaded, that of the five zones only two were habitable; the excessive cold on one hand, and the extreme heat on the other, rendering it impossible, as they imagined, to inhabit the other three*. Besides, it was only by reasoning, and by the knowledge they had of the figure of the earth, that the philosophers of whom I speak, supposed that the southern temperate zone might be habitable. They knew that zone to be at the same distance

^b Geminus, c. 13. p. 52.

* Without a passage of Plutarch, t. 2. p. 896. and one of Geminus, c. 13. we might boldly affirm that this was the general opinion of the ancients; but Pythagorus, according to Plutarch, thought that the torrid zone might be inhabitable. By the by, the reason which this philosopher gave for thinking so, proves clearly the extreme ignorance of those times in physics and geography. We see plainly that the ancients spoke of those matters at random, and without any sort of principles or knowledge.

from

from the equator, as that which they inhabited, and consequently that the temperature of the air ought to be nearly equal. They concluded, that one of these zones being inhabited, the other might be so too; but further they had no certainty that it was so. For far from having any commerce with the people of those countries, they did not even think it was possible to have any. "When we speak," says Geminus, "of the inhabitants of the southern zone, it is not as knowing that zone to be inhabited. We only believe that it may be so: but further we have no positive assurances of it^b." Cicero was not much better informed. "Behold," he makes Scipio say, "behold the earth as surrounded with five zones, of which only two are inhabited; that in the middle being continually scorched with the heat of the sun, while it perpetually freezes beneath the two last. Again, men who inhabit the southern temperate zone, are a species that has nothing in common with ours^d."

Pliny, speaking of the two temperate zones, says positively, that there can be no communication between their inhabitants, because of the excessive heat which burns that which separates them^e. Macrobius, in fine, entering more at large into this subject, assures us, that the people of the two temperate zones have never had commerce together, and that it is even impossible that they should ever have any, on account of the obstacles arising from the terrible heats of the torrid zone^f. They therefore admitted inhabitants in the southern temperate zone, only by conjecture and mere probability, much about the same manner as certain philosophers have supposed them in the moon^g.

^b Geminus, c. 13. p. 50. Geminus lived in the times of Sylla and of Cicero. See also Hygin. poet. astron. c. 8. p. 355.

^d In somn. Scip. n. 6. t. 3. p. 417. See also Hygin. poet. astron. l. 1. c. 8.; Lucret. l. 5. v. 205. 206.

^e L. 2. sect. 68. p. 107.

^f In somn. Scip. l. 2. c. 5. p. 135. & 137.; Hygin. *loco cit.* p. 355.; Diod. l. 1. p. 49.

^g See *supra*, c. 2. art. 2. p. 108. & 109.

A very striking proof of the imperfection in which certain parts of the sciences remained so long a time, is to see antiquity continue almost generally in that opinion, after what we still find in history at this day of the different voyages made round Africa. For, independent of that which the Phœnicians undertook by order of Nechos, we know, that not many ages after the reign of this prince, Xerxes charged a Persian of distinction with a like commission. This navigator, it is true, did not advance so far as the Phœnicians I have spoke of. But the least result of his expedition must have been indications of inhabitants in the southern temperate zone. He affirmed positively, that he had seen of them ^h.

Still more recent was the voyage of Hanno, an experienced navigator, whom the Carthaginians sent to discover the western coast of Africa. His relation exists at this day, and informs us, that this captain had penetrated at least as far as the fifth degree of north latitudeⁱ. The history of that enterprize, published originally in the Punic language, was afterwards translated into Greek, and in that state has been handed down to us. We know how familiar the Greek was to the authors I have just spoke of. By what fatality then have the ancients made no use of these discoveries? and why do they seem to have fallen into oblivion almost as soon as born?

As to what more particularly regards the superficies of our globe, I mean the exact and respective situation of the seas, the continents, and islands; the ignorance of the ancients was great upon all these heads. Wanting proper machines and astronomical instruments, they could not attain the exact knowledge which we are now in possession of. They could not make the observations which are the basis and foundation of them. These important discoveries were reserved for the ages in which we live. In less than fifty years geography has more enriched itself, than in a space of a thousand.

ⁱ See les mem. de l'acad. des inscript.

B O O K IV.

Of Commerce and Navigation.

THE epocha we are now going through, ought to be regarded as one of those which have been the most favourable to commerce and navigation. The ages which close this last part of our work, are the shining ages of Tyre. The Phœnicians themselves were not the only people amongst whom maritime traffic was then seen to flourish. It was held in equal honour amongst many other nations. I have touched a little upon it in the preceding book, giving account of the progress of geography. The facts, of which it remains to speak, will confirm the ideas which my readers may have already formed of the picture they are about to be presented with by the ages which at present engage our attention. I shall unite in one and the same point of view, all I have to say in this last part, upon the state of commerce and navigation, relative to the different nations who have applied themselves to them. It is not possible at this time to divide these two objects, and treat them separately.

C H A P. I.

Of the Egyptians.

WE have seen in the preceding books, the aversion which the Egyptians had originally for the sea, and the little esteem they had for commerce*. I have

* Part I. book 4.

taken care to observe, that though Sesostris forgot nothing to make them alter this way of thinking, he was not however able to destroy it entirely^b. The first monarchs who succeeded this prince, either neglected commerce, or failed to make their subjects relish it. For a long series of ages we do not find any mention made of the commerce of the Egyptians: only as we find in the sacred books, that, in the time of Solomon, many horses were brought from Egypt for the service of that prince^c, we may conclude that there may have been some direct traffic between the Egyptians and the Israelites. But we may equally suppose, that this commerce was carried on by the intervention of third hands. We learn from the poems of Homer, and from the writings of Herodotus, that the Phœnicians kept up a continued correspondence with the Egyptians, and that there was a regulated commerce very anciently established amongst these nations^d; a commerce often spoke of in scripture^e. The Phœnicians were a long time the only nation to whom the ports of Egypt were open^f. Perhaps it was by this way that Solomon drew his horses from Egypt. However that may be, it is not likely that the Egyptians went themselves to traffic on the coasts of Judea. They never quitted their own country. That nation acted formerly as most of the Asiatic nations now act, who wait till the Europeans come, and fetch their merchandises, and supply them with what they may want.

The Egyptians were in general so little jealous of commerce, that they abandoned that of the Red sea to all the people who had a mind to exercise it. They permitted the Phœnicians, the Idumeans, the Israelites, and the Syrians, to have fleets there successively^g. It is equally certain, that, for a long course of ages, the Egyptians maintained neither-merchant fleets nor naval forces.

^b Part 2. book 4.

^c 1 Kings, c. 10. v. 28. 29.

^d Odyss. l. 14. v. 288. &c. ; Herod. l. 1. n. 1.

^e See Isaiah, c. 23. v. 3. ; Ezekiel, c. 27. v. 7.

^f See part 1. book 4.

^g See Prideaux, hist. des Juifs, t. 1. p. 9. 12. 15. 16. 17.

About the latter times of the Egyptian monarchy, the sovereigns who mounted the throne, at length opened their eyes upon the importance and advantages of commerce. Bocchoris, who reigned about the year 670 before J. C. published very wise laws relating to this object ^h. His successors imitated him. The historians of antiquity ascribe to the last monarchs of Egypt, the regulations concerning the trade and commerce of that empire ⁱ.

It was also in the reign of these princes that the ancient maxims of the Egyptians were abolished, in regard to strangers, who had always been prohibited access to Egypt. Psammeticus, who occupied the throne about 100 years after Bocchoris, opened the ports of his kingdom to foreign nations. He gave a favourable reception particularly to the Greeks, and permitted many amongst them to form settlements upon the coasts of Egypt ^k.

Nechos, son and successor to this prince, took it singularly to heart, to cause commerce and navigation to flourish in his dominions. With this view, he undertook to join the Mediterranean to the Red sea, by a canal which went from the Nile. This project, already attempted in vain by Sesostris ^l, was not more successful under the reign of Nechos. He was obliged to abandon it ^m; but this design shows at least the desire which this monarch had to facilitate and extend maritime commerce in his kingdom.

Nechos having renounced the enterprize I have been speaking of, turned all his attention to the marine. He caused a number of ships to be built, some upon the Mediterranean, and others upon the Red sea ⁿ. His intention was to acquire an exact knowledge, not only of those seas, but also of that of the Indies. This monarch conceived projects still more vast. It was, in effect, by his orders, that the Phœnicians undertook the voyage round Africa,

^h Diod. l. 1. p. 90. 106.

ⁱ Ibid. p. 78.

^k Herod. l. 2. n. 154.; Diod. l. 1. p. 78.

^l See part 2. book 2.

^m Herod. l. 2. n. 158.

ⁿ Id. *ibid.*

of which I have spoke in the preceding books^o, and which I shall again have occasion to resume.

From that epocha, the Egyptian monarchs continued to employ themselves greatly on the marine. They built fleets, and endeavoured to train their subjects to the sea: nor were their cares and labours employed in vain. In the reign of Apries, grandson of Nechos, the Egyptians found themselves strong enough, and of sufficient experience at sea, to give battle to the Phœnicians, and defeat them^p. This fact is the clearest proof that can be cited of the progress which these people had then made in navigation, and of the degree of superiority which the naval forces of Egypt had acquired in so short a time.

Apries was succeeded by Amasis. This prince, who should be regarded as the last monarch of ancient Egypt, entered into all the views of his predecessors, and seconded them perfectly, by favouring commerce with all his power, and attracting strangers into Egypt by his benefactions^q. If that monarchy had subsisted a longer time, it is to be presumed, that commerce and navigation would have made a great progress. The Egyptians would at length have availed themselves of the advantages of their situation. In effect, there are few countries in the universe so happily placed as Egypt with regard to commerce. Equally in reach of the Red sea and of the Mediterranean, destined, so to speak, to serve as a centre of union to Asia, Africa, and Europe; she is capable of attracting and embracing the commerce of all these different parts of the world. But the ancient monarchy of the Egyptians drew to an end, at the time when these people began to perceive their advantages. They were therefore unable to profit by them.

The Egyptians, moreover, had carried into their marine and their trade, that spirit of singularity which always characterised the nation. Their ships were built and armed

^o *Supra*, book 2. & book 3. p. 137.

^p Herod. l. 2. n. 161.; Diod. l. 1. p. 79.

^q Herod. l. 2. n. 173.

in a particular manner absolutely different from that observed by other nations, and their rigging and cordage disposed in a fashion that appeared very singular and fantastical^r. As to trade, I have already said, that the men disdained to meddle with it; all the traffic passed through the hands of women^r.

This is all we are able to say of the state of commerce and navigation amongst the ancient Egyptians. We have not the lights and informations necessary to treat of these two objects. We are ignorant, for example, what were the particular objects of the traffic of the Egyptians, and of their manner of exercising trade, and we are no better instructed in the form and value of their coins. Scarce are we able to form any conjectures on this last article*. I shall finish with observing, that as the Egyptians applied themselves seriously to commerce only towards the decline of their monarchy, these people, in all probability, had not time to become acquainted with all its branches, or to understand all the springs of a machine, so complicated, so vast, and so difficult to comprehend.

C H A P II.

Of the Phœnicians.

WHatever idea I may have given before of the commerce and wealth of the Phœnicians, it is nothing in comparison of that which we are to form of them in the ages we are now going through. These people were then masters of all the commerce carried on in the known world.

^r Herod. l. 2. n. 36.

^r Part I. book 6. c. 2.

* There is only room to presume, that very anciently the Egyptians made use of for commerce, amongst other pieces of metal, leaves of gold, very light, and bearing on one side the impression of a sort of rose leaf. See le Recueil d'antiquités de M. le Comte de Caylus, t. 2. p. 18.; & les mem. de Trev. Mai 1756, p. 1253. &c.

The empire of the sea was in their hands; an empire which they had particularly merited by their skill and experience in navigation. We see, in effect, that the Phœnicians were the people to whom other nations always applied when any great maritime enterprize was to be undertaken. The fleets which Solomon sent to the country of Ophir, were conducted by the Phœnicians[†]; and it was the navigators of that nation whom Nechos charged with making the tour of Africa[‡]; an expedition, which, the times considered, demanded great courage, and very superior talents.

Hitherto, that is to say, in the first and second part of this work, I have spoke only of Sidon. I represented it as the most considerable and the most opulent of all the cities then known in Phœnicia. But in the ages which at present fix our attention, that ancient capital was outshone by its colony of Tyre. The writers of antiquity are divided upon the epocha of the foundation of that city. Without entering into all the discussions we should be drawn into by an exact examination of their opinions, it suffices to observe, that, in the time of Homer, Tyre was as yet so little famous, that he does not even mention its name. Sidon only is taken notice of in the writings of this great poet*. Tyre, nevertheless, was not long of rising into fame. We see, that, soon after the time of Homer, that city not only equalled, but even surpassed Sidon. Isaiah, Jeremiah, Ezekiel, and the other prophets represent Tyre as the city of the greatest trade and wealth that had ever been in the universe*. Its inhabitants joined military skill and bravery to the intelligence and activity necessary for maritime traffic.

Many cities dependent upon Tyre, having undertaken to throw off her dominion, they had recourse to Salmanassar King of Assyria. That monarch espoused their inter-

[†] 1 Kings c. 9. v. 29.; 2 Chron. c. 8. v. 18.

[‡] *Supra*, book 3. p. 137.

* See part 2. book 4. c. 2.

* Isaiah prophesied under the reign of Achaz, about the year 740 before J. C.

elts, and declared war against the Tyrians. He equipped a fleet of 60 sail; but that armament was beaten by a Tyrian squadron, consisting of only 12 ships. This action rendered the Tyrians so formidable at sea, that Salmanasar durst no more encounter them on that element. He judged it more advantageous to attack them by land, and therefore formed the siege of Tyre, which he afterwards converted into a blockade. The place was soon reduced to grievous extremity, because the Assyrians had stopped up the aqueducts, and intercepted all the conduits, by which they could receive water. To remedy this inconvenience, the Tyrians fell to digging wells, and that expedient succeeded so well, as to enable them to hold out five years. Salmanasar then happening to die, the Assyrians raised the siege, and Tyre for that time escaped the imminent danger which threatened her. This event happened about the year 720 before J. C.

From that epocha, till the reign of Nebuchadnezzar, Tyre saw her commerce and her splendor continually increase. To give, in a few words, an idea of that city, and to show how great was its wealth, and how extensive its trade, I cannot do better than transcribe the expressions the prophet Ezekiel has made use of to describe and characterise Tyre in the days of her prosperity*.

“O Tyre,” exclaims the prophet, “thou hast said in
 “thyself, I am a city of perfect beauty. Thy neighbours
 “who built thee, have forgot nothing to embellish thee.
 “They have made the hull, and the diverse stories of thy
 “ships, of the fir-trees of Senir. They have taken a cedar
 “from Lebanon, to make thee a mast. They have po-
 “lished the oaks of Bathan, to make thine oars. They
 “have employed the ivory of the Indies, to make benches
 “for thy rowers; and that which comes from Italy, to
 “make thy chambers. Fine linen, with brodered work
 “from Egypt, was that which thou spreadest forth to be

† Menander apud Joseph. antiq. l. 9. c. 14.

* Ezekiel prophesied about the year 595 before J. C.

“~~by~~ fail. Hyacinth and purple from the isles of Eliphah,
“ have made thy flag. The inhabitants of Sidon and Ar-
“ vad were thy rowers; and thy wise men, O Tyre, be-
“ came thy pilots. All the ships of the sea, and all their
“ mariners occupied thy commerce and thy merchandise.
“ The Carthaginians trafficked with thee, and filled thy
“ fairs with silver, with tin, and lead. Javan, Tubal, and
“ Meshech, were also thy merchants, and brought to thy
“ people slaves and vessels of brass. They of Togormah
“ traded in thy fairs with horses and mules. The children
“ of Dedan trafficked with thee. Thy commerce extend-
“ ed to many islands, and they gave thee in exchange for
“ thy merchandises, magnificent carpets, ivory, and ebony.
“ The Syrians were thy merchants, because of the multi-
“ tude of thy works: they exposed to sale in thy fairs
“ pearls, and purple, embroidered works of byssus, silk, and
“ all sorts of precious merchandise. The people of Judah
“ and of Israel were also thy merchants, they traded in
“ thy markets pure wheat and balm, honey, oil, and rosin.
“ Damascus, in exchange for thy wares, so varied and so
“ different, brought thee great riches, excellent wine, and
“ wool of a lively and shining colour. Dan, Greece, and
“ Moset² traded in thy markets, iron works, and myrrh,
“ and calamus. Arabia, and the princes of Kedar were also
“ thy merchants; they brought thee their lambs, and rams,
“ and goats. Shebah and Raamah came also to traffic with
“ thee; they traded in thy markets the most exquisite per-
“ fumes, precious stones, and gold. Thine were the most
“ remarkable of all the ships of the sea. Thy rowers
“ conducted thee upon the great waters. Thou hast been
“ loaded with riches and glory: never any city was like
“ thee. Thy commerce enriched the nations, and the
“ kings of the earth².”

We see by this lively and animated picture, that the com-
merce of Tyre had then no other bounds than those of the
known world. That city was the centre where all met.

² Chap. 27. & 28.

In this respect, profane historians perfectly agree with the sacred books^a.

All this so great prosperity was ended by the most horrible catastrophe. Nebuchadnezzar, sovereign of Babylon, marched against Tyre, the year 580 before J. C. The motives which determined him to that enterprise are unknown to us. The Tyrians opposed a vigorous resistance to the efforts of the Babylonian monarch, but the event was not favourable to them. Nebuchadnezzar made himself master of their capital, but not indeed without great trouble and much fatigue, for he remained thirteen years incamped before the walls of Tyre^b. That expedition was so long and so toilsome, that *every head*, to make use of the prophet's expression, *was made bald, and every shoulder was peeled*^c. The length of the siege had permitted the greatest part of the inhabitants to retire with their best effects into an island very near the shore on which Tyre was built^d. The conqueror having entered the place, found scarce any thing which he could abandon to his troops to recompense them for the toils and labours they had undergone^e. He was so enraged at it, that, putting all to the havock, he destroyed the town to its foundations, and put to the sword all the inhabitants that remained. Thus perished ancient Tyre, 567 years before J. C. and from the time of this disaster she never more arose. The name and the glory of that city were transferred to the New Tyre, which was built on an island situated opposite to the Old^f.

I think I ought not to close this article without saying a word of the Carthaginians. They hold too considerable a rank amongst the nations which formerly distinguished themselves by maritime traffic, for us to pass them over in silence. These people are as well known by their skill

^a See Q. Curt. l. 4. c. 4. p. 159. ; Strabo, l. 16. p. 1097.

^b Joseph. antiq. l. 10. c. 11. *sub. fin*; Advers. Appion. l. 1. c. 7.

^c Ezekiel, c. 29. v. 18.

^d Martham, p. 539.

^e Ezekiel, c. 26. v. 11. & 12. c. 27. v. 36.

^f See Martham, p. 539.

and experience in commerce and navigation, as by the long and bloody wars which they had to maintain against the Romans.

Carthage, said to be founded about the year 890 before J. C. owed its birth to the ancient Tyre^a. The first form of government established at Carthage was certainly monarchical; but that constitution did not subsist long. Every thing leads us to believe that Carthage very soon formed itself into a republic^b. However that may be, this Phœnician colony maintained in its new establishment the taste and industry of its founders. Commerce was, properly speaking, the soul of Carthage, her occupation, her distinguishing and ruling character, the object, in a word, of all her measures, as well public as private. The most eminent personages in the state did not think it below them to be concerned in trade^c, but applied themselves to it with as much ardor and attention as the lowest citizens. Traffic gave birth to Carthage; traffic gave her growth, and placed her in a condition to dispute with Rome for many ages, the empire of the world.

Carthage was more advantageously situated than Tyre: placed in the centre of the Mediterranean, in reach of the east as of the west, she embraced, by the extent of her commerce, all the seas, and all the countries then known. An excellent port offered the securest asylum to ships. The coasts of Africa, a vast and fertile region, furnished in abundance all things necessary to subsist an innumerable people. With such advantages, joined to the genius for trade and navigation which they had brought from Phœnicia, they very soon attained the rendering theirs a most flourishing state. Happy, had they not suffered themselves to be drawn away by a spirit of conquest and dominion; a passion always fatal and ruinous to trading nations.

The history of Carthage does not furnish us, besides, with any thing particular on the object which at present occu-

^a Marsh. p. 398.

^b See Arist. de repub. l. 2. c. 17.

^c Arist. *loco cit.* p. 335.; Polyb. l. 6. c. 9.

pies us. All that we have read in the preceding volumes, on the commerce and the marine of the Phœnicians, agrees equally with the commerce and marine of the Carthaginians. In that respect, I find no difference between one people and the other. We may add, that they were both equally decried for their bad faith, and perhaps very unjustly. We are acquainted with the Phœnicians and the Carthaginians only from reports that are very suspicious. To judge impartially of the character of these two nations, we should have had left us some history of Phœnicia or of Carthage, wrote by a Phœnician or a Carthaginian: we should then have been able to compare the different relations, and by that means to discover the truth.

C H A P. III.

Of the Greeks.

WE ought to refer to the epocha that employs us at present, that of the origin of commerce and navigation amongst the Greeks. Thucydides observes, that these people did not begin to apply themselves seriously to commerce till after the war of Troy*. They gave themselves up to it with so much the more ardor, as, their country being naturally poor and barren, a brisk and extensive commerce could alone procure them that consideration and opulence which render a nation powerful and respectable.

The history of commerce and navigation amongst the Greeks in the ages which now fix our attention, does not however present us with objects as yet very satisfactory. We see indeed some cities of Greece, as well Asiatic as European, begin to addict themselves to maritime traffic. But these first attempts were very feeble. The Greeks were then neither industrious enough, nor sufficiently in-

* *See p. 116.*

telligent, to establish a great commerce. The arts and sciences had not as yet acquired any degree of perfection in Greece, as I think I have sufficiently proved in the preceding books. Accordingly we see, that gold and silver were very scarce, even towards the end of the ages which make the object of this last part of our work.

As to the skill and experience of the Greeks in the marine, we may judge of it by a simple reflection. It is certain, that these people never knew any other observation to direct the course of their ships, than that of the Greater Bear¹. This single fact is a proof of their ignorance and incapacity. Let us add to this, what we have seen elsewhere, that, in the time of Xerxes, the Greeks still believed that it was as far from Ægina to Samos, as from Ægina to the pillars of Hercules; and they knew not what course to hold, after passing the isle of Delos to arrive in Ionia^m.

As to the force and burthen of their ships, I have spoke amply of them in the second part of this work. There my readers have seen that these vessels were very weak and very indifferent. Their marine in that respect had made no progress. Indeed, what idea can we form of them when we see that in the Peloponnesian war the Lacedæmonians transported their ships by land from one sea to the otherⁿ. It even appears that this expedient was then in common use, and frequent enough^o. After these facts my readers must not expect to reap much pleasure or satisfaction from the relation I am about to make of the state of commerce and navigation amongst the Greeks, in the ages which at present engage our attention. I shall run through the history of the principal cities of Greece which were then distinguished for them, succinctly and according to chronological order.

¹ Arat. phæn. v. 40. &c.; Ovid. fast. l. 3. v. 107.; Trist. l. 4. Eleg. 3. init.

^m *Supra*, book 3. chap. 4. p. 140. ⁿ Thucyd. l. 3. n. 81.

^o See Strabo, l. 8. p. 516.

The inhabitants of the island of Ægina may be regarded as the first people of Greece in Europe, who became considerable for their intelligence in maritime traffic. We see in effect, that, soon after the return of the Heraclidæ into Peloponnesus, the Æginetes had great commerce in Greece. They disembarked at Cyllene, and after that made use of mules to transport their merchandise to the interior parts of the country^p. It was also about these ages that this people thought of coining gold and silver into strong and heavy pieces of money^q. If we believe some authors, they were the first amongst the Greeks who brought coined specie into use^r.

The Æginetes had attained the rendering their island the centre of all the commerce of Greece^s, only by keeping up considerable naval forces. It may be said, that, in the ages I now speak of, they were regarded as the greatest maritime power in Greece^t. The Æginetes are even placed in the number of the nations who held the empire of the sea for a long time^u. Nevertheless, they could not maintain themselves in that state of opulence and prosperity. The scene which this people acted in Greece, was as short as it was brilliant. Driven from their island by the Athenians, in the time of Pericles, the Æginetes could never recover that blow^v. Their naval power was annihilated, and their commerce brought very low.

The Corinthians deserve the next place after the Æginetes. They were very early distinguished for their riches and their maritime force. It were difficult to find a city placed more favourably for commerce than was that of Corinth. Situated upon that neck of land which joins Peloponnesus to the continent of Greece at an almost e-

^p Pausan. l. 8. c. 5,

^q Pollux, l. 9. c. 6. p. 1067.; Hesychius, *vocat.* Αἰγινᾶσιον νόμισμα.

^r Marm. Oxon. epoch. 29.; Ælian. var. hist. l. 12. c. 10; Strabo, l. 8. p. 577.

^s See Strabo, *ibid.*

^t See Herod. l. 5. n. 83.; Plut in Themist. p. 113.; Paus. l. 2. c. 29.

^u Strabo, l. 8. p. 576.; Ælian. var. hist. l. 12. c. 10.; Euseb. chron. l. 2. p. 1514. p. 129.

^v See Peizon. not. ad Ælian. l. 12. chap. 10.

qual distance from the two seas, that city seemed destined by nature to serve as a staple to all the people of these countries. The Greeks anciently traded more by land than by sea ^y, and then all the commerce necessarily passed through the hands of the Corinthians. By this means, in ancient times, they amassed great wealth. Accordingly we see the ancient poets of Greece frequently give Corinth the epithet of opulent ^z.

That city contained within its district two ports, one situated on the *Sinus Saronicus*, the other on the gulf called from Corinth *Corinthiacus Sinus*. The Corinthians knew how to avail themselves of the advantages of their position. They addicted themselves to navigation, equipped ships, soon after the Trojan war, to give chase to pirates, and protect commerce ^a. By this means Corinth was not long of becoming the staple of all the merchandises consumed in Greece ^b. Success encouraged her inhabitants, the art of perfecting navigation was the object of their study. They are said to be the first who changed the form of the ancient ships. Instead of simple galleys, the Corinthians built vessels of three ranks of oars ^c. That invention must have procured them, for some time, a kind of superiority at sea. However, we do not find that the Corinthians are reckoned in the number of the nations who have held the empire of that element. There is mention only in Thucydides, of a memorable action between these people and the inhabitants of Corsou ^d, about the year 660 before Jesus Christ. This was the most ancient naval combat that is spoke of in the chronicles of Greece ^e.

The position of Corinth was such, that that city might easily have given law to all the Greeks. Commanding two seas, and upon the isthmus that divides them, it had been easy for them to have hindered one half of Greece from communicating with the other. But the genius and inclination of the Corinthians led them rather to commerce than to mi-

^y Thucyd. l. 1. p. 12.; Strabo, l. 8. p. 580.

^z Hom. Iliad. l. 2. B. v. 77.; Thucyd. l. 1. p. 12.

^a Thucyd. loco cit. ^b Id. ibid. ^c Ibid. ^d Ibid. ^e Ibid.

litary enterprises. Satisfied with amassing great wealth, they took care for nothing but the means of enjoying it, and abandoned themselves to all the luxury and all the delicacy which their opulence afforded them. They applied themselves also to render their city one of the most beautiful and magnificent of Greece, and spared nothing to accomplish it. Corinth was filled with temples, palaces, theatres, porticoes, and a number of other edifices as commendable for the rarity of the marbles employed in their construction, as for the elegance of their architecture. These stately buildings were moreover enriched with an infinite number of columns, and statues of the most precious materials, and executed by the hands of the most famous masters. Luxury, opulence, and effeminacy displayed themselves in every part of Corinth. She was, without contradiction, the richest and most voluptuous city that could be found in all Greece.

Athens, whose maritime force, as we have seen in the second part of this work, was not inconsiderable at the time of the Trojan war, does not however deserve that we should stop to speak of it. That city, during all the space we are now considering, made no figure either by land or sea. She had then neither commerce nor marine. Solon, nevertheless, had forgot nothing to bring arts and manufactures into honour at Athens. He even made a law, by which a son was exempted from the obligation of maintaining his father, if he had taught him no trade. But Attica was too poor in the time of Solon, for the utility of his regulations to be quickly perceived. More than an age elapsed before the effect of them became sensible. Athens did not grow famous for her commerce and her marine, till after the first expedition of the Persians into Greece. It is at that epocha that we see the beginnings of the glory and splendor of the Athenians. I can only indicate them: the ages it takes in, exceed the bounds which I have prescribed myself.

^f Plut. in Solon. p. 90.

^g Id. *ibid.* p. 91.

With

With regard to the Lacedæmonians, we ought not to place these people in the number of those who made themselves considerable by their commerce, and by their naval forces. The spirit of the government established by Lycurgus, was by no means proper to render these two objects flourishing at Sparta. Commerce was in some sort banished from that capital. Luxury was not only proscribed, they had even gone so far, as to forbid the Spartans the exercise of most of the mechanical arts^h. The consequences of such a policy are easily perceived. No body is ignorant that commerce is the soul and support of the marine; but there can be no commerce in a state where the arts are not cultivated, and industry not excited. The kind of money made use of at Sparta, formed of itself an invincible obstacle to commerce. It was of very bad iron, and so heavy, that to carry a sum of ten minæ*, they had need of a cart drawn by two oxen, and of a chamber to lay it up in. That money had no currency amongst the other people of Greece. They rejected, and even made it a subject of railleryⁱ.

Independent of all these considerations, many motives prevented Sparta from ever forming a powerful marine. Laconia, although surrounded by the sea on the east, on the south, and on the west, was not for that more luckily situated. Her coasts were unsafe, covered with rocks and shoals^k. She had only one port, or rather haven^l, which was neither very large nor very commodious. In fine, we may say that Lycurgus had forbid the Lacedæmonians to addict themselves to the sea^m. Let us not then be surprised that navigation was never held in great honour amongst this people. It is true, that in succeeding times

^h Xenophon de rep. Laced. p. 397. ; Ælian. var. hist. l. 6. c. 6. ; Plut. in Lycurg. p. 44. 47. 54. ; Nicol. Damasc. in excerpt. Vales. p. 522. ; Philostrat. vita Apollon. l. 4. cap. 32.

* Ten minæ are 709 livres 6 s. 3 den. French money.

ⁱ Plut. in Lycurg. p. 44. ^k Strabo, l. 8. p. 580.

^l See Thucyd. l. 1. n. 103. p. 70.

^m Plut. in Hist. Lac. p. 239.

Sparta, by certain circumstances, found herself obliged to have ships; but she was quickly disgusted with them.ⁿ Neither was it by their maritime exploits that the Lacedæmonians became illustrious.

I might speak of many other nations, as well of European as of Asiatic Greece, who, towards the ages we are now employed upon, began to turn their views to commerce and navigation. For it is certain, that a great number of cities, of the islands and of the continent, then addicted themselves to maritime traffic. But their history does not deserve a particular attention, since it furnishes no details nor circumstances capable of instructing or enlightening us. I shall only observe, that the Rhodians may be justly called the legislators of the sea. They were the first who thought of reducing into laws, the usages of maritime traffic and the police of the sea. These regulations were found so wise, that many other nations adopted them, and ordained the naval laws of the Rhodians to be followed for deciding the differences which might arise between the seafaring men and the traders. We know not in what age these laws were formed; only it appears, that they were very ancient.^o Furthermore, it is to this spirit of commerce which possessed the greatest part of the inhabitants of Greece, that these people were indebted for that degree of power and consideration which they enjoyed for so many ages. A trading nation is, in general, an active and industrious nation. These qualities necessarily influence the manners, and render the genius fit for great enterprises. Were it necessary to prove this truth, I should not want instances of nations whom commerce has made to flourish. I shall finish by a reflection on

ⁿ Plut. instit. Lac. p. 239.

^o Cicero pro lege Manil. n. 18. t. 5. p. 19., Strabo, l. 14. p. 964.

We find at the end of the second volume of a work intitled *Jus Græco-Romanum*, printed at Francfort in 1596, some laws wrote in Greek, and intitled, *Naval laws of the Rhodians*. Many authors believe, that, in effect, these laws are the ancient text of those which were made by the Rhodians. But no opinion can be more groundless, as it would be easy for me to demonstrate, were not that discussion entirely foreign to our subject.

the manner in which, at different times, the Greeks regarded commerce.

Hesiod and Plutarch have observed, that, in the ages I am now speaking of, commerce was held in great honour amongst the Greeks. No labour, say these authors, was accounted shameful; no art, no trade placed any difference amongst men^p. This maxim so reasonable, and so useful to such a nation as the Greeks, was nevertheless altered. We see by the works of Xenophon, of Plato, of Aristotle, and many other writers of merit, that, in their age, all professions which tended to gain money were regarded as unworthy of a free man^r. Aristotle maintains, that, in a well-ordered state, they will never give the right of citizens to artificers^r. Plato will have a citizen punished who should enter into commerce^r. In fine, we see these two philosophers, whose sentiments on the principles and maxims of government are otherwise so opposite, agree in prescribing, that the lands should be cultivated only by slaves^r. It is very surprising, that with such principles, which all the Greeks appear to have imbibed, they should ever have been so intelligent in commerce, and so powerful at sea, as they are known to have been for some ages.

^p Hesiod. op. et dies. v. 311; Plut. in Solon. p. 79. D.

^r Xenoph. œcon. p. 482.; Plato de rep. l. 2. de leg. l. 8. p. 907.; Arist. de rep. l. 7. c. 9. l. 8. c. 2. l. 3. c. 4.

^r De rep. l. 3. c. 5. p. 344. A. ^r De leg. l. 2. p. 799.

^r Plato de leg. l. 7. p. 891.; Arist. de rep. l. 7. c. 10. p. 437. D.

B O O K V.

Of the Art Military.

Military expeditions were but too frequent in the ages we are now considering, and there were then but too many of those princes born for the plague of humankind, those scourges of the earth whom they have honoured with the name of conquerors. I shall not enter into a detail of their exploits. We ought less to regard the history of their conquests than that of the art-military, which should be our principal object. I shall comprise under one and the same article the Babylonians, the Assyrians, the Medes, Syrians, and Egyptians, in regard to the few details which their history furnishes in these ages relating to the art-military. On the contrary, I shall treat separately of that which concerns the European nations, that is to say, the Greeks, because of the abundance of facts.

We shall see by the facts which I am going to relate, that, in the ages which make the object of this last part of our work, they made war much in the same manner as they had always done before. The people had as yet but a very confined knowledge of the military art. As to the cruelty and barbarity with which I have so justly reproached the first ages, those I am now speaking of, shew us no difference in that respect: we see no change advantageous to humanity. The law of nations was then as little known, and as often violated, as it could have been in the first ages.

C H A P. I.

Of the Assyrians, Babylonians, Medes, Syrians, Egyptians, &c.

IN the preceding books I have shown how little the art of making war was understood in ancient times. In effect,

we ought to put a great difference between giving battle and directing the operations of a campaign. The gaining a battle formerly depended only on the number of troops, and on their courage; skill and capacity had very little share in it. But these two qualities are absolutely necessary in forming the plan of a campaign. In this article particularly consists the art of making war. These principles being established, it is easy to shew, that the military art had as yet made but little progress in the ages I am now speaking of.

In effect, what idea can we form of the manner in which princes then made war, when we see, that, for the most part, they took the field without preparation, without having any formed plan, or any fixed and deliberate projects? In these times of ignorance and barbarism, humour or chance commonly determined a conqueror to fall upon one country rather than on another. The scripture furnishes an example of that sort in the person of Nebuchadnezzar. This monarch, says Ezekiel, stopped in a place where two roads met. There he wanted to learn by divination, on which side he should turn his arms. The lot having fallen on Jerusalem, he marched against that city^a. This passage, which is not the only one I could cite, is sufficient to prove the manner that princes undertook and prepared themselves for a war.

The uncertainty which prevailed in the conduct of these monarchs, appears to me so much the more surprising, as they drew along with them innumerable forces. It was certainly necessary to think of subsistence for so many thousands; and how was it possible to provide it when they took the field without first determining where should be the seat of war? Add to this, that there was a numerous cavalry, besides an astonishing multitude of chariots, in the armies of the princes I have been speaking of.

I should ask also, how they contrived to make such armies perform their evolutions in a day of action? We do not

^a C. 21. v. 21. & 22.

find, that, in the ages we are now considering, they were divided into different bodies. It even appears, that this method was unknown to the Asiatics till the reign of Cyaxares. Herodotus affirms, that this prince was the first who separated the pikes, the horse, and the archers from each other. For before that time, says this great historian, all these different bodies marched confusedly and pell-mell in the armies ^b. Cyaxares reigned about 630 years before J. C. Military discipline was therefore known and introduced into the armies of the Asiatics only since that epocha ^{*}.

As to what concerns the attack and defence of places, that part of the military art was not then absolutely unknown in Asia. Many sieges are mentioned in scripture. Those of Samaria, of Tyre, and of Jerusalem, furnish some lights on the means which the Asiatics made use of to succeed in this sort of operations. We see, that their ordinary manner of attacking a place consisted in surrounding it with trenches and walls, so closely that none of the inhabitants could go out ^c. After that, they brought up the battering-rams ^d to beat down the gates or the walls. When the breach was judged considerable enough, they attempted the assault. To favour and facilitate that manœuvre, they raised terrasses ^e which they lined with archers, or slingers, who drove the besieged from the breach. They also employed the sap ^f to throw down the walls of the place. Such was the manner of taking places besieged in the ages I am now speaking of, and such it had almost always been before.

^b L. I. n. 103.

^{*} In this general proposition we must except the Hebrews. In the time of Moses, they were divided into tribes, which formed each a separate troop with its particular standard. Accordingly we see, that the army of David was divided into bodies consisting of one hundred men, and of one thousand men. It was also formed in three principal divisions, each commanded by a general officer, having under him tribunes and centurions. 2 Sam. c. 18. v. 1. 2 & 4.

^c Id. c. 20. v. 15.; 2 Kings, c. 24. v. 10.

^d Ezekiel, c. 4. v. 2. c. 21. v. 22. c. 26. v. 9.

^e Id. c. 4. v. 2. c. 21. v. 22, c. 26, v. 8, ^f 2 Sam. c. 20. v. 15.

As to the defence of these same places, it consisted in the strength and thickness of the walls, in the breadth of the ditch that surrounded them, in the height of the towers, and in the various machines which were employed in darting of long arrows, and hurling huge masses of stone^c. These means were then sufficient to enable a place to hold out a long time. The siege of Tyre by Nebuchadnezzar lasted thirteen years^b, and that of Azoth by Psammetichus twenty-nine^d. These facts have nothing in them absolutely incredible, if we reflect, that the situation of a place aided by some works formerly rendered it impregnable. Besides, we ought to look upon the sieges of Tyre and Azoth only as mere blockades. That was the only method they could employ to conquer such cities as these. They were to be reduced by famine, and it was not easy to do so. In effect, we have already seen in the preceding books, that most of the great cities had formerly a certain space of land for tillage inclosed within their walls^e.

Furthermore, although there were then places fortified, and capable of holding out a long time, it is certain they must have been few in number, or if there were many in a state, it is certain, that they did not know how to make the proper use of them. In effect, the greatest advantage that can be drawn from fortified places, is to stop the progress of a victorious enemy. Nevertheless, in the ages I am now speaking of, one single battle always decided the fate of a kingdom. We see no army recover itself or rally after a first defeat. All the wars were then, as formerly, decided in a single campaign. The gain of a battle infallibly drew on the conquest of a whole kingdom.

In general, the people of Asia do not appear to have carried very far the knowledge of the art-military. We do not see, that they knew how to take advantage of posts; to seize opportunely a favourable position; to draw the war in-

^c 2 Chron. c. 26. v. 9. 15.

^b Jos. antiq. l. 10. c. 11. sub. fin. advers. Appion. l. 1. c. 7.

^d Herod. l. 2. n. 157.

^e Supra, b. 2. c. 1. p. 55.

to a country naturally defensible; to make use of defiles, either to surprise or harass an enemy in his march, or for security against his attacks; to lay artful ambuscades; to prolong a campaign with address; to avoid coming to a decisive action with an enemy superior in force; to reduce him at length to consume himself through scarcity of provisions and forage. Neither do we see, that these people were either very skilful or very attentive to take advantage of the disposition of the ground, to chuse places where they might support their right or left by rivers, morasses, or heights, to prevent their being surrounded. They were equally ignorant of the art of engaging a large army with one less numerous¹. No mention is made of these resources in the wars of the Asiatics. It appears, that marches, counter-marches, and, in fine, many other military manœuvres were always unknown amongst them.

I shall say only a word of the ordinary consequences of victory amongst the people of Asia. I have said enough in the first and second parts of this work, of the excesses which the conquerors were originally accustomed to. It was still the same thing in the ages we are now going through. Their history in that respect is one continued scene of the most horrible barbarities; and all I have said of the first ages agrees but too well with those we are now employed upon. I need not therefore, I think, take the trouble of retouching that frightful picture. I shall remark one custom, of which we meet many examples in scripture; a custom as barbarous, and as contrary to the laws of nations, as the cruelties with which the first conquerors always sullied their victories. We see the kings of Assyria and of Chaldea, not content with having carried desolation and havock into the countries they had subjected, carry away all the inhabitants whom the sword had spared, and transport them into far distant countries². These conquerors, if we may say so, regarded men as productions of the earth, which they might indifferently transplant from one climate to another.

¹ Rollin, hist. anc. t. 2. p. 419.

² 2 Kings, c. 17. v. 6. c. 24. v. 16. c. 25. v. 11.

I shall also make another reflection upon this subject. After the facts which my readers have seen, we should be led to believe that the earth must formerly have been much less peopled than it is at present. In ancient times the people were almost continually in arms. Perpetual wars, ravages, carnage, and the total destruction of cities, were the ordinary consequences of victory. We have seen proofs of it in the fate which befel Nineveh^a, Samaria^b, Tyre^c, and Jerusalem^d, without speaking of many other examples which I might cite. A country conquered then, was infallibly a country ruined and destroyed. Even a considerable time must have passed before it could recover; since the conqueror, as I have just said, carried into captivity, all that might have escaped the fury of the soldier; and how many families must there not have perished in these forced and cruel transmigrations? The manner in which they then made war, could not therefore fail to sweep from the earth the greatest part of its inhabitants. Asia in particular, the perpetual theatre of horrors and devastations, should very soon have found herself absolutely desert and uninhabited. Nevertheless, the facts related by ancient historians attest, that this part of the world was infinitely populous, even a few ages after those we are now going through. It is, I own, a problem which I cannot easily solve.

C H A P. II.

Of the Greeks.

IN the examination we are going to make of the state of the art-military amongst the Greeks, in the ages

^a Tobit, c. 14. v. 14. edit. of the Septuagint; Nahum, c. 2. v. 8. 10. 13. c. 3. v. 7. Sophon. c. 2. v. 13. 15.; Ezekiel c. 31. v. 3. &c.; Herod. l. 1. n. 106.; Diod. l. 2. p. 142.; Strabo, l. 16. p. 1071.; Alex. polyhist. apud Syncell. p. 210.

^b 2 Kings c. 17. v. 6. Hosea, c. 14 v. 1.; Micah, c. 1. v. 6.

^c See supra, b. 4. c. 2. p. 154.

^d 2 Kings c. 25. v. 9. &c.

now in question, I shall enter into no detail of the wars they might have had amongst themselves. That object is not worth the while. The history of military events which then happened in Greece, is neither very instructive nor very interesting. I shall therefore content myself with speaking, first of the customs which were common in general to all the Greek nation, and then of the practices which may be affirmed to have been peculiar to the Spartans and to the Athenians. These two were without contradiction the first, and even the only people, who, in the ages we are now employed on, had made some progress in the military art. I need no other proofs of it than the superiority which Sparta and Athens so long enjoyed over all the other cities of Greece. I do not, moreover, pretend to enter into any great details upon all the objects I have indicated. As to the Athenians and Spartans in particular, I do not think there is occasion to dwell long upon their discipline and military customs, these objects being the best known and the most familiar.

A R T I C L E I.

Of the military practices common to all the people of Greece.

When I spoke of the military discipline of the Greeks at the time of the Trojan war, I said, that we did not see very clearly in what manner they then levied troops. We can speak more affirmatively upon this subject in the ages we are now going through. We know, that at Lacedæmon, for example, all the citizens were obliged to bear arms from the age of thirty years to that of sixty^r. It was the same thing at Athens. All the young Athenians caused themselves to be inrolled in a public register at the age of 18 years, and engaged themselves, by a solemn

^r Potter archeolog. l. 3. c. 2.

oath, to serve the republic. That act obliged them to march on all occasions that presented till the age of sixty years ^c. We may conjecture that this usage had equally place in all the other states of Greece, who, in all probability, observed in that respect the same discipline as Sparta and Athens. Let us also observe, that amongst all these people deserters were punished with death ^t, and those branded with infamy, who in battle had abandoned their buckler ^u.

In the earliest times of Greece, the soldiers made war at their own expense ^x, and we ought not to wonder at it. Wars of ambition were as yet unknown. They took arms only to defend themselves when attacked, and in hopes of plunder. All wars therefore were then either useful or necessary, and every individual personally interested. Armies, besides, went but a very little distance from the district where the troops which composed them had been raised; and they did not fail to return to it at the end of the campaign. The soldier therefore could easily provide for his subsistence. The war of Troy excepted, many ages passed before the Greeks thought of carrying their arms out of their own country, and till that time their troops were in use to demand pay; for, even in the expedition against Troy, the bait of a rich booty made an ample recompense.

The ambition of the Greeks having increased with their power, they wanted at length to take part in the events of other countries. Different circumstances engaged them in process of time often to transport their troops out of their own territories. Then the state was obliged to furnish particular supplies for the subsistence of the armies which they sent into distant countries. Although history does not expressly say, that Sparta gave pay to those of her inhabitants whom she sent into Asia, yet it may be conjectured

^c Potter archeolog. l. 3. c. 2.

^t Lucian. in navig. n. 33. t. 3. p. 270.

^u See Plut. in Pelop. p. 278. B.; S. Empiric. Pyrrhon. Hyppot. l. 3. c. 24. p. 181.

^x See part 2. b. 5. chap 3.

that the public treasure contributed to their maintenance. It is said, that Lyfander caused to be augmented the pay of the Lacedæmonians who served in the galleys, which that general conducted to the younger Cyrus ^γ. This fact authorises us to think, that the troops of Sparta were then in the use of receiving pay.

Till the time of Pericles, the soldiers at Athens had served the republic gratuitously; but under his government, the war being carried on at a distance, in the Chersonesus, in Thrace, in the islands, in Ionia, &c. for many months together, the republic was obliged to provide subsistence for citizens so long absent from their country, and, of consequence, unable to procure the means of life. For the inhabitants of Attica were for the most part artificers, and subsisted only by their labour and their industry. The pay which the republic gave her troops was stated at two oboli a-day to a foot-soldier, and one drachma to a trooper ^z. It is thus that ambition, in process of time, constrained the Greeks to keep soldiers in pay which they had not originally done. The facts we have just seen, are, it is true, posterior to the ages which close this third and last part of our work. I have notwithstanding thought this digression necessary to give a complete idea of the military discipline of the Greeks. I return to the epocha which ought at present to occupy us.

I have said in the preceding volume, that, according to all appearance, the Greeks, in the heroic times, were not very expert in the art of handling their arms ^a. I shall add, that it must have been still the same in the ages we are now going through. We know, in effect, that there never were any fencing-masters amongst the Lacedæmonians ^b; and as for the Athenians, they only introduced that profession in the eighth year of the Peloponnesian war ^c. Would not this fact lead us to think that the Greeks were

^γ Plut. in. Lyfand. p. 435. B.

^z Potter archeol. l. 3. c. 2. p. 432.

^a See part 2. book 5. c. 3.

^b Plato in Laches, p. 482. 483.

^c Ibid. See the notes of M. Dacier upon this dialogue, p. 338.

not in use to exercise their troops in arms; and that, in this respect, there was neither rule nor discipline amongst these people, every one being permitted to follow his own ideas and particular views?

As to marches, incampments, evolutions, and other military operations, it is not possible to speak of them. We have nothing that can indicate whether the Greeks, in the times I speak of, had any fixed principles, any constant and uniform maxims upon these articles. I should think in general, that these people had not as yet made any great progress in tactics. That science began very late to receive clearness and form.

I have proved elsewhere, that, at the time of the Trojan war, there was no cavalry, properly so called, in the Grecian armies^d. The ages here in question offer a remarkable difference in this respect. In them we see the Greeks make use of cavalry, and have bodies of them in their armies. It might perhaps be interesting to fix the epocha of this change, and make known the authors of it; but it is not possible, on this article, to gratify the curiosity of the reader. We are absolutely ignorant by whom and at what time cavalry was introduced into Greece. All we can say of it is, that the first war of Messene, whose epocha falls about the year 743 before J. C. is the first occasion where history makes mention of cavalry in the Grecian armies^e. There were of them in the army of the Messenians, and in that of the Lacedæmonians. Apparently this establishment must have been pretty recent; for, besides that this cavalry was few in number, it was otherwise so bad as to be scarce of any use. Pausanias remarks on this subject, that the inhabitants of Peloponnesus knew not as yet the art of well-managing a horse^f. We may therefore suppose, without giving too much to conjecture, that the introduction of cavalry into the Grecian armies did not greatly precede the first war of Messene.

^d See part 2. book 5. c. 3.

^e See Acad. des inscript. t. 7. m. p. 298. 327.

^f L. 4. c. 2. p. 320.

The Greeks, moreover, had always very few cavalry. Not that these people did not make great account of them. We see, on the contrary, that they valued them highly; but the soil of Greece, generally speaking dry and barren, was never favourable for horses. The soil of Thessaly alone was fit for breeding and keeping horses; they degenerated every where else^s. It is not possible to doubt of this, when we see that at the battle of Marathon, and at that of Platea, the Greeks had no cavalry, because Thessaly was then in the power of the Persiansⁿ. The Grecian army was, notwithstanding, one hundred and ten thousand strong at the battle of Platea. The maintenance of a body of Thessalian cavalry was besides so expensive, that the greater part of the Grecian cities were not in a condition to support it. Accordingly whoever anciently could maintain horses, was held amongst the Greeks in the highest considerationⁱ.

Let us remark, while we are on the subject of cavalry, that no nation of antiquity knew the use of either saddles or stirrups. No mention is made of them in ancient writers. Education, exercise, and use had taught the horsemen of those times to do without those helps. They knew how to spring lightly on horseback, and keep their seat without the help of either saddle or stirrups. Those who through age or weakness had not the same agility, took the assistance of another; or else they took the advantage of a great stone, or some other elevation, to mount on horseback^k. These customs do little honour to the genius and sagacity of the ancients. We cannot see without astonishment, how little industrious they were to procure themselves certain conveniencies which we can hardly comprehend it possible ever to have done without. Let us now say a little of the attack and defence of places amongst the Greeks.

^s See Acad. des inscript. t. 7. m. p. 330.

ⁿ Herod. l. 6. n. 112. l. 9. n. 128.

ⁱ Arist. de rep. l. 4. cap. 3. t. 2. p. 365. B.

^k See Potteri archeolog. l. 3. cap. 2. p. 435.

This part of the military science was still little known in Greece in the ages which employ us at present. In the war which the Lacedæmonians declared against the Messenians, we see the city of Ithome sustain a siege of 19 years, less by the strength of its fortifications than through the ignorance of the besiegers. The defence of that place consisted solely in its position. It is seated upon a mountain of considerable height and sufficiently steep¹, to render the approaches to it very difficult to people of so little experience in the art of besieging towns as the Greeks of those times. It is thus that many places were able, even before they had invented any kind of fortifications, to sustain very long sieges. Aristotle tells us also, that the ancient cities of Greece were built in such a manner, that although they were not surrounded by walls, they were nevertheless able to defend themselves by the peculiarity of their construction. All the streets were so narrow and so full of windings, that they could, with a small force, easily stop an enemy at every step, and crush him from the tops of the houses^m. Neither is Aristotle the only writer of antiquity who has spoke of this factⁿ. We even find examples of it amongst other nations besides the Greeks^o.

I do not at present see any other objects to indicate, on the state of the art-military in Greece. I shall only remark one practice which we cannot enough commend. It was the custom, after a battle, to assemble the army, to adjudge openly, and in presence of all the troops, the prize of valour to him who should be thought to have deserved it^p. It were superfluous to take up time with shewing the effect which such a custom must have had amongst a people so greedy of glory and distinction as were the ancient Greeks.

We have seen elsewhere what were the laws of war a-

¹ Paus. l. 4. c. 9.; Strabo, l. 8. p. 556.

^m De rep. l. 7. c. 11.

ⁿ See Diod. l. 4. p. 321.

^o See le Rec. des voyages de la compagnie des Indes Hollandoise, t. 4. p. 53. & 54.

^p See Herod. l. 8. n. 123; Diod. fragm. t. 2. p. 637. n. 10.

amongst those people in the heroic times¹. They were not less barbarous in the ages that now employ us. The inhabitants of a taken city were immediately reduced to slavery, and the place entirely destroyed. I think that this spirit of cruelty may be attributed to the political constitution of Greece, where the republican government ruled, and was preferred to all others. In effect, it appears to me, by historical proofs, that, generally speaking, the consequences of a victory were always more cruel in republics than in monarchical states. It is even easy to explain the reason of it. Wars undertaken by monarchs are usually regarded as personal, of sovereign against sovereign. The subjects are scarce ever actuated by motives of private vengeance. Thence comes in part, that humanity which takes place after victory, and the good treatment which prisoners now meet with amongst most of the European nations. It must be otherwise in republics. Guided by other principles and other interests than monarchical states, the wars they undertake are almost always national. Every member of the state takes a lively and personal concern in it, and in battle is necessarily stimulated by particular animosity. Hence their victories must be attended with excesses unknown in the wars of monarchs; and this we see to have happened in all those of the Greeks. These people, in the times I am now speaking of, were divided into an infinity of little republics; all the members of which had a jealous and personal hatred, from which they reciprocally sought to ruin and destroy each other.

After this general view of the state of the art-military amongst the Greeks in the ages which now employ us, we must say a word or two upon the discipline peculiar to the Lacedæmonians and to the Athenians. Antiquity gives to Lycurgus the honour of all the regulations relating to war amongst the Lacedæmonians. We are therefore enabled to judge of the skill of these people in the art-military. It is not altogether the same with the Athenians.

¹ See part 2. book 5. c. 3.

Their progress in this respect was much slower. They began to form themselves to the science of war, but a short time before the irruption of the Persians into Greece. Nevertheless, that I might leave nothing to desire upon this article, I have thought proper to anticipate the times a little, and give an idea of the discipline and military capacity of the Athenians.

A R T I C L E II.

Of the military discipline of the Lacedæmonians.

WE ought to regard the Lacedæmonians as having been, of all the people of Greece, those who possessed the military science in the most eminent degree. All the laws of Sparta, and all the establishments of Lycurgus, tended to make as many soldiers as they reckoned citizens in the republic. War was in some sort the only object regarded at Sparta in the education of their youth^r. After this reflection, we are not to wonder that the Lacedæmonians were unrivalled in Greece, for experience, capacity, and exactness of military discipline. To these qualities they owed their success and their superiority.

Amongst the Spartans, as amongst the other people of Greece, the principal strength of the armies consisted in infantry. It was divided, let the term be allowed me, into a certain number of regiments, composed each of four battalions. The battalion consisted of 128 men, and was divided into four companies of 32 men each^s. All these bodies were commanded by officers of subordinate ranks and employments^t. One of the two kings of Sparta was always placed at the head of the armies^u.

The arms of the Lacedæmonians consisted in great buck-

^r See Plut. in Lycurg.

^s Thucyd. l. 5. n. 68.

^t Id. l. 5. n. 66.; Xenoph. de republ. Laced. p. 399.

^u Herod. l. 5. n. 75.; Thucyd. l. 5. n. 66.; Xenoph. de republ. Laced. p. 401. & 402.

lers,

lers, lances, half-pikes, and very short swords *. They had also, if we may call it so, a sort of uniform for the Lacedæmonian troops. All the authors of antiquity agree that they were constantly clothed in red. The choice of that colour was founded upon two motives. They intended both that the soldiers might the less perceive the loss of blood, and to hide from the enemy the knowledge of the wounds they had made †.

Flutes were the military instruments of the Lacedæmonians. They went always to battle to the sound of that instrument, in order, says Thucydides, that marching at an equal pace, and as it were in cadence, they might be the less exposed to break their ranks. This was the principal object of the military discipline of these people ‡. All their principles, all their tactic rules, and all their military precepts, tended to prevent the troops from ever being broken or dispersed. They had provided for and obviated every event which might expose them to this danger. In this view the Lacedæmonians were forbid to strip the dead in battle §. The same may be said of their maxim of never pursuing too ardently a flying enemy. The Lacedæmonians were very sensible of the hazards they might incur on such an occasion. They wisely preferred moderation and caution to the advantage of killing some men the more ¶. It even often happened, that their enemies having learned, that all who resisted were put to the sword, and that the runaways only were pardoned, preferred flight to resistance ††.

We ought also to bestow great praises on the maxim which Lycurgus had endeavoured to inculcate with his

* Plut. in Lycurg. p. 51. F.

† Xenoph. de rep. Laced. p. 399. ; Plut. instit. Lac. p. 238. F. ; Ælian. var. hist. l. 6. c. 6. ; Val. Max. l. 2. c. 6. ; Suidas, t. 3. p. 639.

‡ L. 5. n. 70. ; Plut. in Lycurg. p. 53. E. ; Paus. l. 3. c. 17. p. 251. l. 4. c. 8. p. 300. ; Lucian. de saltat. n. 10.

§ Ælian. var. hist. l. 6. c. 6. ; Plut. t. 2. p. 228. F.

¶ Paus. l. 4. c. 8. p. 300. ; Plut. in Lycurg. p. 54. A.

†† Plut. *ibid.*

people.

people. He forbade them to make war too often with the same enemies, for fear of instructing them, by laying them under the frequent necessity of defending themselves ^d. These facts are, I think, sufficient to prove how greatly the Lacedæmonians had studied the military art, and the progress they had made in it.

It must appear very astonishing, that a people, whose greatness of soul, and whose prudence we cannot too much commend, should have been so subject to superstition as were the Lacedæmonians. They were swayed by this weakness to such a degree, as to make them risk the safety of their country. History has preserved us one very memorable example. From motives unknown to us at this day, the Lacedæmonians durst not take the field before the day of the full moon. At the time that the Persians, with an army of 300,000 men, were on the point of invading Greece, the Athenians, whom the storm first threatened, dispatched messengers in great haste to Sparta, demanding succours. The answer they got in so critical a conjuncture was, that the Lacedæmonians could not march for some time, because their religion did not allow them to take the field before the full moon ^e.

The Lacedæmonians are liable to a reproach still more shameful, and more essential. They were no way scrupulous on the article of probity. All means by which they might triumph, appeared to them good and lawful. Perfidy and breach of faith cost them nothing ^f. They are also accused of being the first of all known nations, who attempted to corrupt with money the fidelity of the enemies generals, and rendering, so to speak, their victories venal ^g. In this respect, the Lacedæmonians followed their prevailing taste. These people, in general, made great account of cunning and of fraud. We know, that theft was not only tolerated, but even in some sort authorised

^d Plut. in. Lycurg. p. 47. D. Apophthegm. p. 189. F. See what the Czar Peter I. said on the war waged on him by Charles XII. Hist. de Charles XII. par Voltaire, l. i. *sub. fin.*

^e Herod. l. 6. n. 106. ; Strabo, l. 9. p. 611. ; Paus. l. i. c. 28. l. 3. c. 5.

^f See Herod. l. 6. n. 79.

^g Pausan. l. 4. c. 17. p. 321.

by the laws of Sparta ^b. This principle had influence even in the affairs of the state. When the Lacedæmonians owed a victory to the subtilty and address of their generals, they sacrificed an ox; but when they thought it due only to their courage and the force of their arms, they contented themselves with sacrificing a cock ⁱ. The intention of the Lacedæmonians in this practice, which appears ridiculous, was to accustom their generals to employ cunning more willingly than open force ^k.

To this succinct account I have thought proper to confine what I had to say of the military discipline of the Spartans. Those who shall desire to know more of the marches, evolutions; military ranks, and order of incampment of these people, may consult the treatise of Xenophon, intituled, *Of the republic of the Lacedæmonians*.

A R T I C L E III.

Of the military discipline of the Athenians.

I Have already shown the reasons that do not permit us to enter into any great details upon the military discipline of the Athenians. It must be granted, besides, that we have but few lights upon this object now remaining, either, that time has robbed us of those of the ancient authors who might have instructed us in it, or, which appears to me most probable, that there was nothing in this respect which deserved to be particularly transmitted to posterity. The Athenians, in effect, did not yield to the Lacedæmonians in bravery; but I think they were inferior to them for skill and capacity, and in general for all the operations of war. The manner in which the armies of the Athenians were commanded, cannot, for example, give us a great opinion of the abilities of this people in the art-military.

The Athenians placed at the head of their troops ten chiefs equal in authority ^l, because that Athens being

^b See Plut. in Lycurg. p. 50. et Institut. Laced. p. 237.

ⁱ Plut. instit. Laced. p. 238. F. ^k Id. ibid.

^l Herod. l. 6. n. 103.; Com. Nepos in Miltiad, n. 4.; Plut. apophthegm. p. 177. C.; in Cimone, p. 483. E.

composed of ten tribes, each of them would furnish its own. These ten chiefs took their turns in the command; that is to say, they commanded alternately, each for one day ^m. Their authority being equal, it might happen, as the event shewed more than once, that, in their deliberations, five should be of one opinion, and five of another ⁿ. To remedy the inconveniencies which this division of opinions could not have failed to occasion, they joined to the ten generals an officer {known in antiquity by the name of *Polemarch*. This officer had a vote in the council of war, and so could turn the scale ^o.

It was the people who chose the ten generals charged with the command of the troops of the republic. They were usually in place only for one year, and were almost always changed at every campaign. I think it were superfluous to insist upon the inconveniencies and defects of such a discipline. I shall content myself with relating a bon mot of Philip King of Macedon, the father of Alexander. I admire, said this prince, the happiness of the Athenians. In the whole course of my life, I have been able to find but one general (*Parmenio*); but the Athenians never fail to find, to their hand, ten every year ^p.

It suffices to know the character of the people of Athens, to be able to perceive the motives of a conduct so whimsical and so singular. It was the fear of tyranny which most certainly had put the Athenians upon contriving that multiplicity, and this continual change of generals. Never people, in effect, were more passionately fond of liberty, or took more jealousy and umbrage at their chiefs than that of Athens. All their politics tended to diminish the authority which they were obliged to trust them with. They sought therefore to shorten the duration of it, and to cause the command to pass incessantly into different hands, in the view of preventing and hindering the enterprises which their generals might be tempted to

^m Herod. l. 6. n. 110.; Plut. in Aristid. p. 321.

ⁿ Herod. l. 6. n. 109. ^o Ibid. n. 110.

^p Plut. apophthegm. p. 177. C.

form against their liberty, and against their independence^a.

As to the rest, when I advanced that the Athenians were very inferior to the Lacedæmonians in experience and military capacity, I did pretend to rob the first of the glory which they so justly acquired by many well-conducted expeditions. I only meant to say, that in general the Athenians appear to have wanted that firmness and that consistency of conduct, which alone can insure the success of enterprises. Inconstancy, impatience, and precipitation governed but too often the steps of the Athenians. It is to these defects, inseparable from the constitution of their government, rather than to any real incapacity, that I think we ought to attribute the misfortunes which overwhelmed them about the end of the Peloponnesian war. By her want of conduct, her presumption, and her temerity, Athens lost even the advantages which she had in sea-affairs over the Lacedæmonians and the other people of Greece. I can dwell no longer upon an article so interesting. The events which occasioned the total fall and entire humiliation of the Athenians, happened in ages which do not enter into the plan I have proposed*.

I have already had occasion to say, that humanity constituted the ground of the general character of the Athenians^r. We find a striking proof of this in a law which does too much honour to this people to pass over it in silence. That law ordained, that those who had been maimed in the wars, should be maintained at the expense of the state. The same favour was granted to the fathers and mothers, as well as to the children of those who, having died in battle, had

^a See *supra* book 1. c. 5. p. 30.

* It is for this reason also that I could not possibly speak of the naval forces of the Athenians. I said in the article of navigation, in laying open the state of the marine among the Greeks, in the ages we are now employed upon, that Athens had then neither a mercantile nor a military marine. In effect, the Athenians did not turn their attention to the sea, till the invasion of Greece by Xerxes, and that event is posterior to the ages which close this third and last part of our work.

^r *Supra*, book 1. c. 5. art. 1. p. 38.

left a family poor and unable to subsist^r. We may say of such an establishment, that it shewed equally the humanity and wisdom of the legislator who proposed it, and the generosity of the people who adopted it. Antiquity gives the honour of it to Pisistratus^r, who seized the government of Athens about the year 550 before J. C.

I do not think it necessary to dwell any longer upon the military discipline of the Athenians. To speak of it properly, I should be obliged, as I have already said, to come down to ages which would exceed the bounds I have prescribed myself. In effect, it was only a little time before the age of Pericles and Alcibiades, that tactics began to take a certain and regulated form amongst the Athenians. It was also nearly about the same time that this people made many advantageous changes in their armour^u, and that they became acquainted with the art of besieging and defending places. Till this time, I do not see, that, the Spartans excepted, the Greeks had any fixed principles, or very constant and positive rules upon all these objects. I think therefore, that, for the ages I have had occasion to speak of in this work, we must content ourselves with general views and ideas, and rather inquire into the spirit which animated the Greeks in their wars, than the history of their military discipline, the detail of which is for the most part absolutely unknown.

^r Plato in Menex. p. 525.; Ex Heraclide Plut. in Solon. p. 96. C.; Diogen. Laert. in Solon. lib. 1. segm. 55. p. 34.

^t Plut. in Solon. p. 96. C.; Diog. Laert. in Solon. lib. 1. segm. 55. p. 34.

^u See Diod. l. 15. p. 36.; Cornel. Nepos, in Iphicrate, n. 1. Iphicrates commanded the armies of Athens about the year 356 before J. C.

B O O K VI.

Manners and Customs.

ARts are perfected, and commerce extended, only in proportion as a passion for luxury, a taste for magnificence, and the love of pleasure gain ground amongst the people. What has been premised of the state of the arts, and of the progress of commerce and navigation, in the ages which are the object of this third part of our work, must have given the reader some foresight of the inclinations and manner of living, in those times, of the nations we are going to entertain him with.

Hitherto I could only speak in a manner very vague and general of the manners of the greatest part of the nations of Asia. The Babylonians even, and the Assyrians, whose monarchy is so ancient, that the original of it arises to the ages nearest the deluge; the Babylonians and Assyrians could furnish nothing for the first, nor for the second part of my work. How, in effect, could I treat of their manners, in ages where the history of these nations is absolutely unknown to us? The assistance we receive from ancient writers for the times now in question, will make us amends for that involuntary silence. I shall speak afterwards of the Medes: the origin and termination of the monarchy of these people falls exactly within the epocha which at present employs us. I shall enter also into some detail on the manners of the Lacedæmonians and Athenians. As to the Egyptians, I shall say nothing of them at present, forasmuch as I thought proper to relate in the first part whatever might concern the manners and customs of that people. I may indeed allow myself some reflections on their genius and distinguishing character. A nation so famous in antiquity as the Egyptians, well deserves that we should be taken up with it more than once.

C H A P.

C H A P. I.

Of the Asiatics.

Nothing is more capable of making us conceive to what a height many nations in Asia had carried luxury and pomp in the ages now in question, than what we read in scripture, of the magnificence of the court of Solomon. There we learn, that the Queen of Sheba, although prepossessed with the splendor of that monarch, was nevertheless astonished at beholding the manner of serving his table, the number of his officers, the richness of their apartments, and the magnificence of their apparel^a. All the drinking-vessels of Solomon were of pure gold, as well as the vessels of the house of the forest of Lebanon. I speak not of his throne, nor of the brilliant and splendid retinue which attended each time he went to the temple^b; these facts are well enough known. We may say, that what we read in scripture, and in Josephus, of Solomon's manner of living, is far beyond any idea we could form of the most brilliant and magnificent courts of the universe.

It appears, that this taste for pageantry and magnificence was hereditary in the kingdom of Judah. The princes who occupied that throne till the captivity, held great state, and kept a most brilliant court: many officers to serve them, a croud of courtiers, eunuchs, stately palaces, dress and furniture the most curious and most sumptuous, &c. It is said of Hezekiah, that he complaisantly shewed the ambassadors of the King of Babylon his treasures, his perfumes, his precious ointments, his jewels and precious vessels^c. But I only indicate these objects. I have already said, that the history of the Hebrews does not enter into the plan I have laid down. I go on to the manners of the Assyrians, the Babylonians, and the Medes.

^a 1 Kings c. 10. v. 4. &c.^b 1 Kings c. 10.^c 2 Kings c. 20. v. 13.; 2 Chron. c. 32. v. 27.

A R T I C L E

A R T I C L E I.

Of the Assyrians.

ALthough in the preceding volumes I have often had occasion to speak of the Assyrians, yet hitherto it was not possible for me to give any idea of the character and of the manners of this people. We are ignorant of the events which may have happened in the Assyrian empire for the greatest part of its duration. The lights which history furnishes into the latter ages which preceded its destruction, enable us to enter into some details, and to deliver some reflections relative to the genius and manners of its inhabitants.

We can scarcely judge, at this day, of the manners of the Assyrians otherwise than by that of their monarchs; history, in other respects, not having transmitted to us any particularity, any circumstance upon this article. But as, in great empires, the people readily enough take the conduct of their princes for their model, there must have been a good deal of relation between the manners of the sovereigns of Assyria, and those of their subjects. Admitting this principle, we may advance, that very great luxury reigned amongst the Assyrians in the brilliant ages of their monarchy. In effect, although the writers of antiquity have very probably greatly exaggerated the debauches of Semiramis, as well as the effeminacy of Ninias, and of his successors down to Sardanapalus; we may nevertheless regard their relations as not altogether void of appearance and reality. They had undoubtedly some foundation. It is then more than probable, that the monarchs of Assyria had a seraglio where they passed the greatest part of their life in pleasures and sensuality; that their dress and furniture were of the highest magnificence, and the most curious that were then known;

known; in a word, that pomp and luxury surrounded them on all sides ^a.

The Assyrians then, according to the principle I have laid down, must, in the reign of their last monarchs, have been a people greatly addicted to luxury and voluptuousness; vices which appear, so to speak, attached to the southern climates of Asia. I would not however admit as a proof of the depravation of manners of the Assyrians, the liberty which in that nation a brother had to marry his sister ^c. I should rather attribute that custom to bad policy, than to the effect of debauchery ^{*}. Besides, we have enough of proofs of the irregularity and licentiousness which reigned in Assyria in the ages which now employ us, to leave out facts whose principle may appear dubious. What we read in scripture of the mission which God gave the prophet Jonah, suffices to shew to what a height debauchery and corruption had then risen at Nineveh [†].

The Assyrians were nevertheless a brave and warlike nation. We have seen, that, for all the dismembering of their empire by the revolt of the Medes, and by that of the Babylonians, they still maintained themselves in great power and glory for 144 years ^f. The Assyrians even gained after that revolution some advantages over the Medes, and over other different people ^g. We must therefore regard them as a nation who knew how to unite a taste for luxury and pleasures with bravery and military talents. I shall also add with the sciences, since the Assyrians have been placed in antiquity, in the number of nations who passed for having first observed and calculated the course of the stars ^h. With

^a See Diod. l. 2. p. 136. 137. 141.; Justin, l. 1. c. 3.; Athen. l. 12. c. 7. p. 529. 545.

^c Lucian de sacrific. p. 530.

^{*} See what I have said on this subject, supra, book I. c. 4 p. 24.

[†] It is certain, that Jonas lived under Joash and Jeroboam II. Kings of Israel; but the time at which he was sent to Nineveh, is not equally known. We may believe it was about the year 800 before J. C.

^f See book I. c. 1. p. 5.

^g See Herod. l. 1. n. 102. l. 2. n. 141.; 2 Kings c. 15. v. 19. 29. c. 16. v. 9. c. 9. v. 5. 6.

^h Cicero de divinat. l. 1. n. 1.; Diog. Laert. l. 1. Proœm. p. 1. & 2.

respect to the arts, we may well judge, that all that could depend upon them must have been extremely cultivated amongst a people whose inclinations were such as we have seen. This is all we can say of the manners and genius of the Assyrians. I have shewed the reason in the beginning of this article.

A R T I C L E II.

Of the Babylonians.

IT is not the same with the Babylonians as with the Assyrians. The insights which holy scripture gives us on one hand, and profane history on another, into the manners and customs of this people, enable us to speak of them with a tolerable degree of knowledge and precision.

The Asiatics had in all times a great inclination for pomp, luxury, and effeminacy. The manners of the Babylonians were but too much tainted with these essential vices. The sacred books are full of reproaches which God, by the mouth of his prophets, ceased not to make against Babylon for her depravities. The writers of antiquity give us also the same idea; but I think we should distinguish two epochas in the history of Babylon. I presume, that the disorders I have been speaking of, should not be applied to the first ages of that monarchy. They respect, in my opinion, only the latter times. Corruption of manners was probably introduced amongst the Babylonians only by the excessive power of their empire. As to the rest, it is in this state, that is to say, in the brilliant ages of Babylon, that we are going to consider the manners of her inhabitants.

The Babylonians, in the times I now speak of, were much addicted to the pleasures of the table. We know not how far they carried their delicacy in this point, or what it might consist in. All we know is, that in this respect debauchery amongst these people went to the greatest excesses, being in general greatly given to wine and drunkenness. What

Dan. c. 5. v. 2.; Q. Curt. l. 5. c. 1. p. 271.; Apocalypf. c. 18. v. 14.

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we read in the prophet Daniel, of the feast which Balthasar made for all his court, at the eve of the taking of Babylon by Cyrus, suffices to give us an idea of the dissoluteness and licentiousness which reigned in the repasts of the Babylonians^k. For, as I have already remarked, in great monarchies, we may judge of the manners of the people by those of their sovereigns. The looseness of this sort of feasts must have been so much the greater, as women were admitted to them^l; and as supper seems to have been the favourite meal of the Babylonians^m. I conjecture, moreover, that these people eat lying upon bedsⁿ.

The dress of the Babylonians consisted of a tunic of lawn, which they wore next their skin. It descended in the eastern mode to their feet. Above that they put a woollen robe, and again wrapped themselves in a cloak, the colour of which was extraordinary white. The Babylonians let their hair grow, and covered their heads with a kind of bonnet or turban^o. They were shod with only a sole very thin and very light^p. And for stockings, they wore a sort of drawers or hose^q, such, in all appearance, as the eastern nations still wear at this day. We know further, that amongst the Babylonians every one wore a signet on his finger, and never went out without having in his hand a staff highly fashioned; on the top of which there was in relief a pomegranate, or a rose, or a lily, or an eagle, or some other figure; for it was not allowed to carry a staff simple and unadorned: they were all to be set off by some ornament, some apparent and distinguishing mark^r.

The dress which I have here described, was that of the common people. But rich and dignified persons affected

^k Chap. 5. ^l Dan. c. 5. v. 2.; Q. Curt. l. 5. c. 1. p. 271.

^m Dan. c. 5. v. 5. c. 6. v. 18.

ⁿ See Esther, c. 1. v. 6.

The Medes and Persians only are spoke of in this passage; but we know, that these nations had borrowed all their luxury from the Babylonians. See *infra*, art. 3.

^o Herod. l. 1. n. 195.

^p Strabo, l. 16. p. 1082.

^q Dan. c. 3. v. 21.

^r Herod. l. 1. n. 195.; Strabo, l. 16. p. 1082.

in their cloathing the greatest nicety and the utmost magnificence. They were not contented with stuffs of gold and silver embellished with dyes and the most precious embroidery; they enriched them still further with rubies, emeralds, sapphires, pearls, and other jewels which the east always furnished in abundance^f. It is, moreover, in the art of embroidering stuffs that the Babylonians appear to have particularly excelled^g. Collars of gold were also a part of their finery^h. It is also probable that they wore pendants at the ear of the same metal, or of precious stonesⁱ. Such was the dress of the men. As to that of the women, we can say nothing of it. No author of antiquity that I know of has mentioned it.

Together with the luxury and costliness of their dress, the Babylonians delighted in perfumes, of which they made very great use; frequently perfuming the whole body with odoriferous waters^j. They had even refined, if we may say it, upon these kinds of voluptuous niceties. The perfume of Babylon was renowned amongst the ancients for the excellence of its composition. They chiefly used it during their meals^k.

I know not whether the Babylonians were as studious of magnificence and decoration of houses within or without, as of luxury and refinement in dress. There is nothing to instruct us in this article. But there is all ground for thinking, that pomp and opulence shone in the palaces of the satrapes and other persons of distinction in the court of Babylon. In effect, from what has been shown elsewhere of the grandeur and expense of works of architecture executed at Babylon, in the ages we are now employed upon^l, we should presume, that great magnifi-

^f See the Apocalypse, c. 18. v. 12. 16.

^g Plin. l. 8. sect. 74. p. 476.; Martial. l. 8. epigram. 28. v. 17. l. 14. epigram. 150.

^h See Sext. Empiric. l. 3. c. 24. p. 177.

ⁱ Herod. l. 1. n. 195.; Strabo, l. 16. p. 1081.

^j Id. *ibid.*

^k Athen. l. 15. c. 13. p. 692.; Plut. in Artaxerx. p. 1022.

^l See book 2. chap. 1. p. 62.

ence reigned in the houses of that capital. But we are ignorant, as I have said, in what the luxury of the Babylonians, in this respect, precisely consisted.

As to the interior decoration of apartments, it appears that these people were very curious and very nice in most part of their furniture, which, however, was never very considerable amongst the ancients for number or variety. Their greatest luxury in this article consisted in carpets, and in ornamental coverings for chairs and beds. Pliny speaking of a carpet fit for covering such beds as the ancients made use of at table, says, that this piece of furniture, which was produced from the looms of Babylon, amounted to eighty-one thousand sesteria^b. We may judge by this sum of the magnificence and curiosity of this sort of furniture. The scripture also makes mention of different vessels of ivory, of marble, and brass, with which apartments were adorned at Babylon^c. It even appears, that many of these vessels were ornamented and enriched with precious stones^d; that is to say, that they were intended much less for use than for luxury, parade, and ostentation. We may judge from these facts, that all which industry had then been able to invent for the richness of furniture, was greedily sought out by the Babylonians.

I took care to remark, in the preceding volumes, that chariots had been in use in civilized nations from all antiquity. But it is not the same with litters, the invention of which I take not to be so ancient, nor the use of them so general as that of cars and chariots. To effeminacy, the ordinary attendant of luxury, we may attribute the invention of litters. This sort of carriage has been, in effect, but little known except in voluptuous nations. Whatever may have been its origin and antiquity, the custom of being carried in litters and other kinds of vehicles, was practised amongst the Babylonians^e. These different sorts of

^b L. 8. sect. 74. p. 477. See also Mart. l. 14. epigram, 150. These eighty-one thousand sesterces come to 14,364 livres 12 s. $5\frac{4}{5}$ d. of French money.

^c Apocalypf. c. 18. v. 12.

^d Apocalypf. ibid.

^e Herod. l. 1. n. 199.; Apocalypf. c. 18. v. 13.

conveniencies

conveniencies could not escape a people so sensual, and so fond of the comforts of life, as the inhabitants of Babylon were become in the ages I now speak of.

We can speak but very imperfectly of the pleasures and amusements of the Babylonians. Antiquity has transmitted nothing particular upon this article. We can only conjecture that these people had a great taste for music. The scripture expressly marks it. There we even find a pretty large detail of the different kinds of instruments in use amongst the Babylonians^f. But then this is all we can say upon that subject. For it is not possible at this day to specify what were the instruments spoke of in scripture, or how they were played upon.

We should also place hunting in the number of the diversions of the Babylonians^g. These people were so passionately fond of this exercise, and esteemed it so great a pleasure, that, preferably to any other subject, they chose hunting-pieces of painting for their apartments^h. They even carried their taste for this kind of representations so far, as to have them embroidered on their cloaths and on their furnitureⁱ. The pleasures of the table, music, and hunting, are all that we know of the diversions which may have been in use at Babylon. Though I do not doubt but we may add dancing, for all there is no mention made of it in ancient writers.

As to the rules of decorum and common practices of civil life, I remark as an exception to the general maxims of the Asiatics, that, amongst the Babylonians, the women were not shut up in the inner apartments. It appears on the contrary, that they lived familiarly with the men. They were not only admitted to public feasts^k; they were also permitted to see strangers, and to eat with them^l.

^f Dan. c. 3. v. 5.; Apocalypf. c. 18. v. 22. See also Q. Curt. l. 5. c. 1. p. 264. 265.

^g Xenoph. Cyrop. l. 1. p. 9. 10.; Nicol. Damascen. in excerpt. Vales. p. 425.

^h Diod. l. 2. p. 122.; Ammian. Marcell. l. 24. c. 6. p. 406. 407.

ⁱ Plaut. in Pseud. act. 1. scen. 2. v. 14.; Athen. l. 12. c. 9. p. 538. D.

^k Dan. c. 5. v. 2.; Q. Curt. l. 5. c. 1. p. 271.

^l Q. Curt. *loco cit.*

Yet for all this the Babylonians had eunuchs, and even in great numbers^m. This conduct, I own, affords a contrast difficult enough to account for. But it is not the only instance of the contradictions to be found in the manners of the different nations of this world. Let us now take a general view of the characters and genius of the inhabitants of Babylon.

The Holy Spirit, by the mouth of the prophets, often reproaches them with great pride and hardness of heart, joined to an excessive love of pleasureⁿ. As to pride and vain-glory, this vice was not peculiar to the Babylonians. The orientals, in all times, seem to have been affected with much haughtiness and vanity. But these sentiments must have still increased amongst the Babylonians, from the ruin and the total desolation of the ancient empire of Assyria. From that epocha they undoubtedly deserved but too well the reproaches of pride and vanity which Isaiah and the other prophets incessantly make them. These people were then intoxicated with the splendor and formidable power of their monarchy.

As to hard-heartedness, it is clear from the scripture, that this reproach is due to them, only for the manner they treated the Jews subjected to their dominion. They had, in this respect, cruelly abused the advantages which God had given them over this ungrateful and unfaithful people^o. Besides, I do not think that hardness of heart was the characteristic and essence of the genius of the Babylonians. They appear, on the contrary, to have been of a character mild and humane enough, such as is common to nations addicted to pleasures, and given up to voluptuousness. I even think, that, independent of this reflection, we may find a proof of what I advance in a custom whose establishment we must attribute to sentiments of mildness and humanity. Every year, for five days of a

^m 2 Kings c. 20. v. 18. ; Dan. c. 1. v. 3. ; Jos. antiq. l. 10. c. 16.

ⁿ See Isaiah, c. 13. v. 19. c. 14. v. 13. &c. c. 47. v. 6. 7. 8. ; Apocalypse, c. 18. v. 3.

^o See *supra*, book 2. c. 1.

certain

certain month, they celebrated at Babylon a feast, during which the slaves changed places with their masters, having a right to command, and to be served by them. They even chose one slave in every house, who, during all the time of the feast, was held for the head of the family, and wore, in consequence, a distinguished habit^p. This custom appears to intimate a fund of mildness and principles of humanity very distant from that harshness with which we know the ancients commonly treated their slaves^{*}.

It is not possible to justify the Babylonians equally from the accusation of an inordinate propensity to pleasures, and the most extravagant debauchery. Babylon, towards the end of the ages I now speak of, was gorged with riches. They produced the same effects there, as they have produced in all times amongst all nations; dissoluteness and corruption of manners, the constant train of luxury and effeminacy. The sacred writers describe Babylon as a city plunged in the most shocking lewdness^q; and profane authors own, that there never was a more corrupted city^r. They made a particular study of all that could delight the sense and excite the most shameful passions^r. After this portrait of the manners of Babylon, let us not wonder that we see that city so often designed, in the allegorical language of the sacred writers, under the name of the *great whore*.

Most of the writers who have had occasion to speak of the lewdness and licentiousness which reigned at Babylon, have not failed to attribute the principal cause of them to a religious ceremony observed amongst these people from time immemorial; a custom which, for that reason, it is necessary to lay open, with all the details and circumstances which history has been able to transmit to us upon this subject.

^p Beros. apud Athen. l. 14. cap. 10. p. 639. C.

^{*} I would not, however, affirm that the custom I have here spoke of, had place in the ages now in question. It may have been only an imitation of the Saturnalia, and introduced among the Babylonians after the conquests of Alexander. We know that Berosus is posterior to that event.

^q Isaiah, c. 13. v. 19. ; Apocalypse, c. 18. v. 3.

^r Q. Curt. l. 5. c. 1. p. 271.

^s Id. ibid.

By a law, founded upon an oracle, it was ordained for all women to repair once in their lives to the temple of Venus, and there prostitute themselves to strangers*. Here is the ceremonial which was observed upon these occasions. Every woman, on arriving at the temple of the goddess, sat down, having her head crowned with flowers. In that edifice, there were many galleries and windings where the strangers remained, whom the love of debauchery never failed to draw thither in great numbers. They were permitted to chuse her they liked best amongst all the women who came to satisfy the law. The stranger was obliged, when he accosted the object of his choice, to give her some pieces of money, and to say when he presented it, "I implore for thee the goddess Mylitta*." He then led her to a retired place out of the temple, and satisfied his passion. The woman could not reject the sum which was offered her, however small it might be, because it was a point of religion. Neither was she permitted to refuse the first stranger that offered himself. She was obliged to follow him, of whatever condition he might be†.

As soon as the women had satisfied the law, they offered, according to the custom prescribed, a sacrifice to the goddess, and then they were at liberty to return to their houses; for when a woman had once set foot in the temple, she was not permitted to leave it without having fulfilled the obligation imposed upon her by the law‡.

This obligation, moreover, was not exactly in force, except amongst the common people, and those of low condition. Women distinguished by their rank, their birth, or their riches, had found means to elude the law. They caused themselves to be carried in their litter to the entrance of the temple; there, after having taken the precaution to send back all their attendants, they presented themselves for a moment, and for form only, before the

* Herod. l. i. n. 109.; Strabo, l. 16. p. 1081.

• This is the name the Babylonians gave to Venus. Herod. l. i. n. 109.

† Herod. l. i. n. 109.; Strabo, l. 16. p. 1081.

‡ Herod. *ibid.*

‡ Herod. *ibid.*

statue of the goddess; they then immediately left the temple, and returned home.

This religious custom, this obligation imposed upon all women, of prostituting themselves publicly once in their lives, has been regarded, as I have already said, by all the writers who have had occasion to treat of the manners of the Babylonians, as the perpetually subsisting cause and principle of the depravation and extreme licentiousness to which these people were abandoned. I dare affirm, however, that this custom, which at first sight appears so shocking, owed perhaps its origin less to corruption and disorder, than to the ideas with which the ancients were prepossessed on the subject of the Divinity. Let us try to maintain this proposition.

The ancients, whose philosophical ideas were neither very just nor very sublime, regarded the gods as beings in some sort jealous of the happiness of men^a. They were particularly persuaded in regard to Venus, that this goddess instigated the sex to impurity and disorder^a. It is for that reason, that they ordinarily placed her temples without the cities^b. We see also, that maids, and even widows intending second marriages, did not fail, before their nuptials, to offer sacrifices to Venus in order to render her propitious^c. For I repeat it, the ancients were intimately persuaded, that this goddess delighted in throwing the sex into disorders and debauchery.

From these facts, which are very certain and undoubted, I think, that the law which, amongst the Babylonians and other people^d, ordained women once in their lives to prostitute themselves to a stranger in the temple of Venus; I think, I say, that this law, far from having been established

^a Herod. l. i. n. 32. l. 3. n. 40.

^a See Hom. Iliad. l. 24. v. 30.; Odyss. l. 4. v. 261. 262.; Plut. t. 2. p. 146. D. p. 310. F.; Ovid. metam. l. 2. v. 238. &c. Fastr. l. 4. v. 157.; Appollodor. l. i. p. 7.; Hygin. fab. 58.; Martial. l. 2. epigram. 84.; Pausan. l. 9. c. 16. p. 742.; Parthen. Erot. c. 5.; Schol. Hom. ad Iliad. l. 5. v. 412.; Valer. Maxim. l. 8. c. 15. § 12.

^b Vitruv. l. i. c. 7. ^c Paus. l. 2. c. 34.

^d See Herod. l. i. n. 199.; Ælian, var. hist. l. 4. c. 1.; Strabo, l. ii. p. 805.; Justin. l. 18. c. 5.

to favour debauchery, was on the contrary contrived to prevent it. Here are the reasons on which I think this opinion may be established.

The authors of the law I speak of, convinced, that Venus was an envious and malevolent divinity, sought such means as they thought the most proper to secure the honour of the sex from the caprices and from the malignity of that goddess. It was undoubtedly in the view of appeasing and satisfying her, that they contrived the kind of sacrifice I have spoke of. They wanted so to ransom the virtue of the women, and insure their chastity for ever, by causing them to make one deviation, with which they flattered themselves, that Venus would content herself, and, of consequence, leave these victims in tranquillity the rest of their life.

I shall again attribute to the same principle, that is to say, to the desire of averting the influences of a malignant divinity, what we read of the custom they had in many countries, of consecrating to prostitution a certain number of women and maids*. They wanted, in all appearance, to obtain by this kind of offering, that all the rest of their women and maids should lead a chaste and regular life.

I think moreover, that we find a strong proof of what I advance upon the end and motives of this institution, in Justin's manner of speaking of it. This author says, that, from time immemorial, it was a custom in Cyprus to send maids to the sea-shore on certain days, there, by prostitution, to offer their virginity to Venus as a tribute they paid her for the rest of their life†. We may affirm, that the Babylonians had the same intention, when they contrived the religious custom which my readers have just seen. I draw a proof of it from the words which the stranger accosting a woman was obliged to pronounce: "I implore for thee the goddess Venus." Does not this form of prayer clearly indicate the end and motives of these singular services? What Herodotus adds immediately after, completes what is neces-

* Strabo, l. 6. p. 418. l. 11. p. 805. l. 12. p. 837.

† *Pro reliqua pudicitia libamenta Veneri soluturas.* l. 18. c. 5. See also Augustin. de civit Dei, l. 4. c. 10.

sary to confirm the idea I have given of them. This great historian has taken care to remark, that the women of Babylon having once fulfilled the obligation imposed by the law, were not after that to be seduced by any offer that could be made them ^s. Ælian says as much of the women of Lydia, a country where the same law was established ^h. In fine, let us add, that, amongst the nations where it was customary to consecrate, to prostitution in the temple of Venus, a certain number of maids, there was no body who did not think himself honoured by espousing them ⁱ.

Do not these facts suffice to destroy all the inferences which they would draw from the religious custom I have related, against the manners of the Babylonians? If corruption did prevail amongst these people, we ought to attribute it to quite another cause. I even doubt whether depravation of manners was carried to the utmost excess in the ages which employ us at present. In my opinion, it was not till afterwards. Herodotus tells us, that, after the taking of Babylon by Cyrus, the inhabitants falling into indigence and misery, made no scruple of prostituting their daughters for profit ^k. Quintus Curtius says as much. He even adds, that husbands were not ashamed of abandoning their wives to strangers for money ^l. But what Quintus Curtius says of the manners of the Babylonians, regards only the age of Alexander, an age distant enough from those which are the object of this third part of our work. Then, according to Herodotus, the Babylonians having been already a long time fallen from their ancient splendor, were become a people as vitious as contemptible.

I have remarked in the preceding article, speaking of the Assyrians, that these people had known how to unite bravery, and a taste for the sciences, to the most determined propensity to luxury and voluptuousness. We may say as much of the Babylonians, and with still more reason. All

^s L. I. n. 199.

^h Var. hist. l. 4. c. 1.

ⁱ Strabo, l. II. p. 805.; Val. Maxim. l. 2. c. 6. § 15.; August. de civit. Dei, l. 4. c. 10.

^k L. I. n. 196.

^l L. 5. c. 1. p. 271.

antiquity has given testimony to their valour and military talents. Xenophon, a very competent judge in such a matter, says expressly, that the east had no better soldiers than those of Chaldea^m. As to their exploits, the holy scripture on one hand, and profane history on the other, speak too often of them to leave any necessity of insisting upon them. In the last place, it was the Babylonians who conjunctly with the Medes took Nineveh, and destroyed the empire of Assyriaⁿ; a conquest which I presume to have been fatal to these two nations; since, according to all appearance, it is from this epocha, that luxury and corruption of manners began to be introduced amongst them. I shall examine this question more particularly in the article of the Medes^o.

As to the taste of the Babylonians for the sciences, we know, that, by the agreement of a great number of ancient writers, the honour of having found their first principles, and given the first precepts in them, was due to the Chaldeans^p. I do not think it necessary to insist further upon this subject at present, having enlarged upon it elsewhere, giving an account of the discoveries and of the progress which the most ancient nations had made in the sciences^q.

Neither is it necessary to say much upon the genius of the Babylonians for the arts. What has been shown before of the works, and of the embellishments of Babylon, and of the skill of the inhabitants in casting metals^r, joined to what has been just said of the luxury and magnificence of their dress, puts it beyond a doubt, that there must have been excellent artists in all kinds at Babylon. I think we may affirm, that, for all that depends upon industry and workmanship, the Babylonians yielded to no people that were then known.

I finish the draught of the character of the Babylonians by the best grounded reproach which can be made that nation. They were singularly besotted with judicial

^m Cyrop. l. 3. p. 150.

ⁿ See supra, book 1. c. 1. p. 6. & 7. ^o See infra, art. 3.

^p Cicero de divinat. l. 1. n. 41.; Diod. l. 2. p. 142.; Strabo, l. 1. p. 43.

^q Supra, book 3. p. 96. & 120. ^r Supra, book 2. c. 1. p. 61. 62.

astrology,

astrology, and, in general, much addicted to occult sciences. The Chaldeans, whom we ought to regard as the learned of Babylon, employed themselves in astronomy only with a view of reading in the stars the destinies of men and of empires. They pretended to have attained it; and it is impossible to carry credulity higher in that respect, than it was carried by the Babylonians^f. It appears further, that, not content with seeking to penetrate the dark clouds of futurity, by studying the different aspects of the stars and planets, the Chaldeans were greatly addicted to forceries and enchantments. The study of magic, after that of judicial astrology, was their principal occupation^g. They boasted themselves able to avert misfortunes which threatened, and procure all good fortune, by their expiations, their sacrifices, and their magical ceremonies^h. The Eternal, by the voice of his prophets, often derides that blind confidence which the Babylonians placed in their magi and in their astrologersⁱ, a confidence which all profane authors equally attest. These reproaches so often and so generally repeated, make it certain, that the Babylonians were an excessively credulous and superstitious nation. This is moreover a weakness to which the Asiatics appear in all ages to have been particularly subject. There is no country, which even in our days presents such a jumble of superstitions and religious practices, each more extravagant and more ridiculous than the other.

From all the different traits that I have thrown together under this article, it results, that the Babylonians, in the brilliant ages of their monarchy, were a very polished, brave, and ingenious people, with great taste and talents for the arts and sciences; but withal very vain-glorious, greatly addicted to luxury and pleasure; in fine, very superstitious and very credulous; vices which, I have already said, did not form

^f See Isaiah, c. 47. v. 13.; Cicero de divinat. passim.; Diod. l. 2. p. 142. &c.

^g Isaiah, c. 47. v. 9. 12.; Ezek. c. 21. v. 21.; Dan. c. 1. v. 20. c. 2. v. 2. c. 5. v. 7.

^h Diod. l. 2. p. 142. See Stanley historia philosophiæ, part 12. sect. 1. 12. & 14. 23. ⁱ See Isaiah, c. 47. v. 11. 15.

the particular character and genius of the Babylonians, but in general that of all the eastern nations. What in that respect they were in all times, they still continue to be at this day.

ARTICLE III.

Of the Medes.

WE have handed down to us a good many particular and direct informations relating to the manners of the Medes, and we are still more enabled to judge of them by considering those of the Persians, of which very minute details are to be found in the writers of antiquity. In effect, it is certain, that the Persians had borrowed from the Medes that luxury and effeminacy, which disgraced them so much in the latter times of their empire^y. Thus the facts which antiquity has transmitted concerning the manner that the Persians lived in the brilliant ages of their monarchy, may equally serve to give us a very just idea of the manners and customs of the Medes.

The Medes were originally a very simple and unpolished people. The first notice that history takes of them, is to tell us that they were subjected by the Assyrians under the reign of Ninus^z. We see them support that subjection patiently for many ages, and afterwards throw off the yoke, without knowing very well how or at what time these people obtained their deliverance from the dominion of the Assyrians^a.

Whatever may have been the epocha and circumstances of this famous revolution, the Medes, after some years of confusion and anarchy, elected a king^b. This prince, named *Dejoces*, applied himself to civilise his new subjects. He built Echatana, which he made the capital of his kingdom, and even embellished it with a good deal of magni-

^y Herod. l. i. n. 135.; Xenophon. Cyrop. passim; Strabo, l. ii. p. 797. & 798.

^z Diod. l. 2. p. 114.

^a See *supra*, book i. c. i. p. 5.

^b Ibid. c. 3. p. 9.
fience

science^c. We may judge, that in general Dejoces had a great taste for pomp and shew. It is evident from all his conduct^d; and it is probable that he inspired his subjects with the same sentiments. This however is all we can say of the manners of the Medes during the reign of Dejoces. History has transmitted nothing particular concerning them.

From that epocha, that is, from the year 710 before Jesus Christ, the history of the Medes begins to clear up, and be better known to us. We see a train of kings succeed each other for two hundred years, till the moment that Cyrus united in his own person the crowns of Media and Persia. It is in the reign of Astyages, grandfather of this prince, and of Cyaxares the last king of the Medes, that we are about to consider the manners of that nation.

Of all the nations spoke of by the writers of antiquity, the Medes are those who appear to have been the most exclaimed against for their luxury, their pageantry, and their effeminacy^e. The luxury of these people shone principally in the sumptuousness and magnificence of their dress. They wore long flowing robes with large hanging sleeves. This sort of dress was very graceful; and as it was in general very full and flowing, it was very proper to conceal the defects of the shape^f. These robes were moreover woven with different colours, each more shining than the other, and richly embroidered with gold and silver^g. As to the head-dress, the Medes let their hair grow, and covered their heads with a tiara, or kind of pointed cap, very magnificent^h. They were, besides, loaded with bracelets, gold chains, and necklaces adorned with precious stonesⁱ. The Medes, in fine, carried their niceness in dress so far as to tinge their eyes and eyebrows,

^c Herod. l. 1. n. 98. ^d See id. *ibid.*

^e See Athen. l. 12. p. 512.; Tertullian. *de cultu femin.* l. 1. p. 152.

^f Xenoph. *Cyrop.* l. 8. p. 122.; Diod. l. 2. p. 119.; Justin. l. 1. c. 2. l. 41. c. 2. Strabo, l. 11. p. 797.

^g Herod. l. 1. n. 111. Xenoph. *Cyrop.* l. 8. p. 126.

^h Xenoph. l. 8. p. 127.; Plut. *de Fort. Alex.* p. 329. 330.

ⁱ Id. *ibid.*

paint their faces, and mingle artificial with their natural hair ^k. Such was the attire of the men. As to that of the women, we can say nothing certain about it. Ancient writers give us no lights into this article. They only tell us that in Media the sex was remarkably beautiful ^l.

The luxury of the table amongst the Medes was equal to that of dress. In a feast which Astyages gave to Cyrus, there was the utmost profusion, as well in the quality as the variety of cookery and diversity of meats ^m. We see also that these people employed the precaution of essaying the drink that was presented to the king. The cupbearer, before he presented the cup, poured some drops into the hollow of his left hand, and tasted it ⁿ.

It would be curious enough to know, in what precisely consisted the delicacy and magnificence of the Medes in respect to the luxury of the table. But I already said that ancient writers have entered into no detail upon this article. I am of opinion, that no very high idea should be formed of the talent of these people for the elegance and delicacy of good cheer. I judge so from the manner of eating in use at this day throughout all the east. We know that the art of cookery is there in very narrow bounds; and I think, that in this respect it has been the same in all times. For, as I have more than once had occasion to observe, customs have varied very little amongst the orientals.

However that may be, debauches at table were excessive amongst the Medes. They got drunk at it very frequently. The monarchs were no more reserved upon this article than the lowest of their subjects ^o. History has preserved one instance of their intemperance, too striking to be passed over in silence. In the war which

^k Xenoph. Cyrop. l. 1. p. 5. This sort of paint consisted in a dark colour, with which the ancients tinged their eyebrows and eyelids, to make their eyes appear larger and more lively.

^l Xenoph. Cyrop. l. 5. p. 50; Anab. l. 3. p. 130.

^m Xenoph. Cyrop. l. 1. p. 5.

ⁿ Xenoph. Cyrop. l. 1. p. 6.

^o Xenoph. l. 1. p. 6.

Cyaxares, the last of the Median kings, made against the Babylonians, Cyrus, who had joined his arms to those of that prince, finding a favourable occasion of beating the enemy, set out at night, at the head of all the cavalry. Cyaxares, on the contrary, passed that same night in a debauch, and carried it so far as to get drunk with all his principal officers ^p.

Music, amongst the Medes, was called in to heighten the pleasures of the table. They sung and played freely upon instruments. The monarchs themselves took part in this diversion, and generally in all that could animate festal jollitry ^q. Dancing also may be reckoned amongst the pleasures of the Medes; they gave into it with great ardor and transport ^r.

Hunting was also one of the exercises which employed the sovereigns of Media the most agreeably. In order to take this pleasure with the more facility, they had even taken care to inclose large parks, in which were kept lions, boars, leopards, and stags ^s.

It is impossible to say any thing certain of the manner in which the houses of the Medes may have been built. We can only conjecture, that these people made a great part of the decorations of their edifices consist in the diversity of colours with which they painted them on the outside. I think I may propose this conjecture from what Herodotus relates of the walls of Ecbatana. That city was inclosed with seven circuits of walls, disposed in such a manner, as that from without, the first did not intercept the view of the entablature of the second, the second of the third, and so on of the rest. The battlements of the first wall were painted white, those of the second black, of the third purple, of the fourth blue, of the fifth orange; and of the two last circuits, the battlements of one was gilded with silver, the other with gold ^t. From these facts I

^p Xenoph. Cyrop. l. 4. p. 62.

^q Xenoph. Cyrop. l. 1. p. 6. l. 4. p. 62. ^r Ibid. l. 1. p. 6.

^s Ibid. l. 1. p. 7. 8. & 9.

^t L. 1. n. 98.

imagine

imagine that the Medes were probably in use to paint the outside of their houses with different colours; a custom which we know to be practised at this day in several countries.

As to the interior decoration of apartments amongst these people, we can speak of it but imperfectly. Only I think we may affirm that tapestry was in use amongst the Medes. This sort of furniture was in effect known to the Persians^u; and we know that the Persians had borrowed from the Medes all that could contribute to luxury and magnificence^x. We may even say that tapestry could not be merely a matter of luxury amongst the Medes. Media is in general a pretty cold country, and for that reason the custom of lining apartments with tapestry must have been both very useful and very necessary.

At the court of Ecbatana shone particularly that pomp and magnificence of which ancient writers give us so high an idea. If their testimony is to be admitted, it was even from the Medes that most of the eastern nations had borrowed the ceremonial which was observed at the courts of the sovereigns of that part of the world^y. We may judge of the exterior pomp that surrounded the person of the kings of Media, by that superb cavalcade of which Cyrus thought fit to give a spectacle to his newly-conquered subjects. The preparations of that feast were entirely ordered according to the customs of the Medes^z. In fine, we shall form a still higher idea of the grandeur and sumptuousness which reigned at the court of the sovereigns of Media, if we recollect the manner that the writers of antiquity speak of the magnificence which shone at the court of the kings of Persia; for, as I have already said, the ceremonial observed at the court of the kings of Persia, was only an exact and faithful imitation of that of the kings of Media.

^u Plut. in Themist. p. 126. 127.; In Artax. p. 1626.; Tertullian. de cultu femin. l. i. p. 152.

^x Strabo, l. ii. p. 797.; Xenoph. Cyrop. l. 8. p. 142.

^y Strabo, l. ii. p. 797. & 798.

^z Xenoph. Cyrop. l. 8. p. 126. &c.

It is also from the Medes that the Persians had received that profound veneration which they felt for the persons of their kings^a. The respect which the Medes bore their sovereign was such, that they durst not spit, nor even laugh in his presence^b. His orders were always speedily and punctually executed.

The history of the Medes is not enough known for us to be able to speak with any exactness of the customs which they observed in the ordinary course of civil life. I shall only remark in the manners of this people, one singularity, well worthy of notice. In certain cantons of Media, polygamy was not only permitted; it was even authorised by an express law, which ordained every inhabitant to marry and maintain at least seven wives. In other cantons it was precisely the contrary. A woman was allowed to have many husbands, and they looked with contempt on those who had less than five^c.

As to the particular character of the Medes, we may affirm it in general to have been very brave and very warlike. I have already said, that they passed for the first people of Asia who had introduced discipline into armies^d. We know also, that the Medes had taught the Persians the art of war, and particularly, to handle the bow and the javelin with dexterity^e.

I do not think, that the Medes ever made themselves very remarkable for skill in the sciences. My authority for thinking so, is, that they are no where quoted in the number of nations amongst whom the sciences were anciently teen to flourish.

As to arts and manufactures, it is to be presumed, that whatever related to them was carefully sought out by the Medes. It cannot even be doubted, after what we have seen

^a Strabo, l. ii. p. 797.

^b Herod. l. i. n. 99.

^c Strabo, l. ii. p. 798. To this day in several cantons of India women are permitted to have many husbands. Voyage de Franc. Pyrard, p. 274.; Lettr. edif. t. io. p. 22.

^d Supra, book 5. c. i. p. 161.

^e Strabo, l. ii. p. 797.

of their ruling taste for pomp and magnificence, luxury and effeminacy.

I should think as to the rest, that vain-glory and effeminacy, vices which the Medes are so often taxed with by all the writers of antiquity, did not begin to be introduced into that nation, and to corrupt its manners, till after the destruction of the empire of Assyria. Till that time, the Medes did not form a monarchy powerful and opulent enough to abandon themselves to luxury and pleasures. Besides, before this event they saw themselves surrounded on all sides with powerful and warlike enemies, (the Assyrians and Babylonians), who forced them to be vigilant and attentive to avoid becoming quickly their prey. The Medes in this position had too many measures to guard, and too many precautions to take, to allow them to abandon themselves with excess to luxury and sensuality. But the monarchs of Media, by overturning the throne of Nineveh, delivered themselves from a dangerous neighbourhood, which however was necessary to render their subjects active and vigilant. In fine, the riches with which these princes and their troops glutted themselves at the sack of Nineveh, and above all, the daily and habitual communication with a soft and voluptuous people, such as were then the Assyrians, corrupted their manners, and made them soon degenerate from those of their ancestors. What gave the finishing stroke to the Medes, was their union and incorporation with the Persians under Cyrus. From that epocha, there is no more mention of the Medes in history.

C H A P. II.

Of the Egyptians.

IN the preceding volume, and even in this one, I have laid before my readers, under different articles, all that might concern the laws, arts, sciences, manners, and customs of the Egyptians. But I deferred till now the resuming all these

these different objects, and the bringing them under one and the same point of view, to draw, in consequence, one general and collective picture of the character of the Egyptians, and to make known the particular genius of that nation. I take this to be the place to present at one view, and under the same aspect, all the different traits that antiquity may have furnished upon this object. I shall explain then in few words, the idea I have been able to form of the Egyptians, and shall trace from facts the character of this people, so boasted of in all ages.

The Egyptians rendered themselves famous in antiquity by their laws, their arts, and their sciences. In effect, that nation becoming quickly civilized, made, in consequence, some early discoveries, and even a pretty rapid progress in several branches of the arts and sciences. This merit should not be denied the Egyptians: but otherwise, I see nothing that can serve to distinguish them in a manner very advantageous; I even think myself authorised to refuse them the greatest part of the elogies that have been always so liberally bestowed upon them.

The Egyptians did invent some arts and some sciences, but they never had the ingenuity to bring any of their discoveries to perfection. I have exposed their want of taste, and I venture to say of talent, in architecture, in sculpture, and in painting^f. Their manner of practising physic was absurd and ridiculous^g. The knowledge they had of astronomy and geometry, was but very imperfect. Their discoveries are far enough from entering into any comparison with those which the Greeks made afterwards in these two sciences. In fine, the Egyptians have had neither genius, ardor, nor talent for commerce, or for the marine and art-military.

As to civil laws and political constitutions, the Egyptians had indeed some very good ones; but otherwise there reigned in their government, a multitude of abuses and essential

^f Supra, book 2. c. 2.

^g See part 2. book 3. c. 2. art. 1.

defects,

defects, authorised by the laws and by their fundamental principles of government ^h.

As to the manners and customs of this people, we have seen to what a height indecency and debauchery were carried in their public feasts and religious ceremonies ⁱ. The public cult which a nation fixes to honour the Deity, bears the stamp of that nation's character; neither was the morality of the Egyptians extremely pure; we may even affirm, that it offended against the first rules of rectitude and probity. We see, that the Egyptians bore the highest blame of covetousness, of ill faith, of cunning, and of roguery ^k.

It appears to me to result from all these facts, that the Egyptians were a people industrious enough, but as to the rest, without taste, without genius, without discernment. A people who had only ideas of grandeur ill understood, and whose progress in all the different parts of human knowledge never rose beyond a flat mediocrity. Knavish into the bargain, and crafty, soft, lazy, cowardly, and submissive; and who having performed some exploits to boast of in distant times, were ever after subjected by whoever would undertake to subdue them. A people, again, vain and foolish enough to despise other nations without knowing them ^l. Superstitious to excess ^m, singularly addicted to judicial astrology ⁿ, extravagantly besotted with an absurd and monstrous theology ^o. Does not this representation sufficiently authorise us to say, that all that science, that wisdom, and that philosophy so boasted of in the Egyptian priests, was but imposture and juggling, capable of imposing only on people so little enlightened, or so strongly prejudiced, as were anciently the Greeks in favour of the Egyptians *?

Let us remark nevertheless, that even admitting the

^h Supra, book I. c. 4. p. 17. &c.

ⁱ See part I. book 6. c. 2.

^k See Plato de rep. l. 4. p. 642. de leg. l. 5. p. 852.; Stephan. Byfant. voce Αἰγυπτιῶν, p. 38.; Suidas, voce Αἰγυπτιαῖον, t. I. p. 643.

^l See Herod. l. 2. n. 41.

^m See part I. book 6. c. 2.

ⁿ See Herod. l. 2. n. 82.; Diod. l. I. p. 91. & 92.; Cicero de divinat. l. I. n. I.; Plut. conviv. sap. p. 149. A.

^o See part I. book 6. c. 2.

* See acta philosoph. t. I. p. 229. &c. 634. &c.; Conringius de hermet. med. l. I. c. 12.; Scherlone amœnitat. litter. c. 7. p. 190.

testimony

testimony of the ancients, the elogies they have been pleased to pour upon Egypt, respect only her laws, her police, her arts, and her mathematical knowledge; but fall not at all upon those productions which belong properly to genius and taste. Neither Greece nor Rome have ever praised the eloquence, the poetry, the music, the architecture, the sculpture, the painting of the Egyptians. I shall say as much of what concerns an object much more essential, medicine. We see, that neither the Romans nor the Greeks ever vaunted of the knowledge of these people in navigation, commerce, or the art-military. I see nothing then but the philosophical and moral ideas of the Egyptians, which antiquity seems to have held in some esteem; but beyond that, I think I have good grounds for maintaining, that the Egyptians had but very confused notions, and very imperfect ideas of all the other objects of human knowledge. I should be greatly tempted to compare this nation with the Chinese. I think a good deal of resemblance and conformity is to be perceived between one people and the other*.

C H A P III.

Of the Grecians.

IN that infinite number of different people which anciently inhabited Greece, I see only two, the Lacedæmonians and the Athenians, whose manners and customs deserve a particular attention. The others offer no facts sufficiently striking, nor any varieties important enough, to engage us to dwell upon them. With very little difference, we may judge of the inclinations and customs of all the Greeks by the manners, and by the way of living of the Lacedæmonians and Athenians. In the picture which I am about to present, I shall use the same method as I have already done in other

* To make an estimate of the arts, sciences, laws, police, and morals of the Chinese, see Anson's voyage, book 3. c. 10.

articles; that is, I shall speak of them very summarily. Longer details would be useless, and would only multiply repetitions. That matter has been sufficiently treated of in many works, which are in the hands of all the world.

ARTICLE I.

Of the Lacedæmonians.

THERE are very few nations amongst whom the legislature has attended to the regulation of manners and of the ordinary customs of civil life, by positive laws. The Lacedæmonians are to be placed in the small number of people, who have had a code for their manners and their customs. The ordinances of Lycurgus take in equally the general police of Sparta, and the actions of its inhabitants in private life. We are so well instructed in the austerity and rigidity of the discipline to which the Spartans were bound up, that I do not think it necessary to insist upon it. It is sufficient to say, that the most indifferent actions were not free at Sparta, no body had power to regulate his life by his own will, every thing to the slightest steps was subjected to one common and uniform rule^r.

A Spartan was not permitted, for example, to marry when he thought proper, to see his wife when he chose, nor to abide with her as long as he would wish^s. Neither was he at liberty to dress for himself the kind of food he liked, nor to eat in private. Every inhabitant was obliged to take his repast in the public halls, and to content himself with what was there served up. The tables were each of about fifteen covers. They eat their separate messes, seated without regard to ease^r.

The kings of Sparta themselves were obliged to this kind

^r See Xenoph. de republ. Laced. p. 395.; Plut. in Lycurg. p. 54.

^s Xenoph. p. 393.; Plut. in Lycurg. p. 48.

^r Athen. l. 4. p. 141.; Serv. ad Æneid. l. 7. v. 176.

of life. Agis having returned from gaining a great victory over the Athenians, thought he might sup at home with his wife. He sent in consequence for his commons. The Polemarchs refused it him, and he was obliged to go eat at the public table ^c.

Neither sensuality nor gluttony found there their gratifications. The meats they served were neither choice nor nicely cooked. They consisted of bread and wine, cheese, dried figs, and some morsels of flesh meat coarsely dressed ^d; and even of them they presented to the guests only the quantity absolutely necessary for the necessities and for the support of life ^e. To appear too fat and too well fed, was not allowed at Lacedæmon. A Spartan who was found in over good case, was severely punished and corrected of it ^f. After having eat and drunk very soberly, they returned home in the dark, for it was expressly forbid to be lighted home at Sparta ^g.

The Spartans maintained the same limitations and the same coarseness in their dress as at their tables. Winter and summer they wore the same kind of cloathing, which was very short and very simply made up ^h. They did not shave, but, on the contrary, affected to wear very long and bushy beards ⁱ. Their greatest finery consisted in the beauty of their hair. The Spartans wore it very long, and took extremely great care of it ^j. Their manner of dressing it was to divide it equally on each side of the head ^k. The Spartans were otherwise very dirty and slovenly about their

^c Ælian. var. hist. l. 3. c. 34.; Plut. in Lycurg. p. 45. 46.

^d Plut. ibid. p. 46.

The most exquisite of all these dishes was a kind of pottage known in antiquity by the name of *black broth*. We cannot, at this day, define exactly what this sort of ragout was. But to judge of it by what ancient authors say, the black broth of the Spartans must have been but a sorry kind of food. See Cicer. Tusculan. l. 5. n. 34.; Plut. in Lycurg. p. 146.

^e Plut. p. 45. 46.

^f Ælian. var. hist. l. 14. c. 7.

^g Plut. p. 46.

^h Thucyd. l. 1. p. 7.; Plut. t. 2. p. 237.; Xenoph. p. 394. & 397.

ⁱ Plut. t. 2. p. 232. E. See Meurs. miscell. Lac. l. 1. c. 16.

^j Herod. l. 7. n. 208.; Strabo, l. 6. p. 426.; Plut. in Lycurg. p. 53.; Paus. l. 7. c. 14.

Plut. in Lycurg. p. 53.

persons, being allowed to bathe and perfume themselves only on certain days prescribed. However, they were obliged to keep their cloaths unrent and in good condition; for they did not fail to punish those who appeared not to take care enough of them ^d.

The Spartans were neither more free, nor more nice in their houses and furniture than in their board and dress. We may judge of it by an ordinance which Lycurgus had made on that article. It bore that the ceilings of houses should be made with an axe, and the doors by a saw, without the aid of any other tool ^e. Such houses as the legislator intended, exempted the inhabitants of Sparta from luxury and expense. In effect, as Plutarch judiciously observes, there is no man so foolish as to carry into houses so coarsely built as those I speak of, either stately beds, purple coverlets and tapestry, vessels of gold and silver, or, in a word, any kind of magnificence ^f.

The pleasures and amusements of the Spartans were answerable to all this. Their diversions were the most serious and of the least variety. The Spartans knew no amusements but hunting and the different exercises of the body; and under this name I comprehend dancing, which was, properly speaking, amongst these people only a kind of military exercise ^g. The Spartans had also a kind of music; but very simple, not to say very rude ^h. Besides, all that can properly be called pleasures and amusements were banished Sparta ⁱ. They would not even permit theatrical representations ^k, which were the delight of all the other cities of Greece.

The private and particular occupations of the Spartans were, if possible, more limited and more restrained than were their pleasures and amusements. The citizens of

^d Plut. t. 2. p. 50. 227. 239.; Xenoph. p. 398.; Ælian. var. hist. l. 14. c. 7.

^e Plut. in Lycurg. p. 47. ^f Ibid.

^g Plut. p. 54.; Xenoph. p. 395.

^h Plut. p. 54.; Arist. de rep. l. 8. c. 5.; Quintilian. instit. l. 1. c. 10.; Ælian. l. 12. c. 50.

ⁱ Plato deleg. l. 1. p. 775. F.

^k Plut. instit. Lac. p. 239.

Sparta could know neither domestic œconomy, nor business, nor law-suits, as all their goods were in common, and as besides they never meddled with commerce, every kind of traffic being expressly forbid them¹. This is not all; they could exercise no mechanic art, nor even cultivate their lands. This care was left entirely to slaves^m. As to the sciences and belles lettres, we know that they never were held in honour amongst the Spartans. These people learned nothing but what was absolutely necessary to be known for the necessities of civil lifeⁿ. We may therefore affirm, that the Spartans, according to the intention of Lycurgus, were extremely idle the greatest part of their lives. Accordingly, we see that they passed their time in discourse, and conversing in the common halls, where they assembled every day on that account^o; and even the subject of their conversations was limited and regulated by the laws. They could only treat of certain matters^p. Such was the life of the Lacedæmonians, which gave room for this bon mot so famous in antiquity. They boasted to Alcibiades, the contempt which the Lacedæmonians shewed for death. "I do not wonder at it," said he; "it is the only means they have of freeing themselves of that perpetual irksomeness and constraint which is caused by the life they are obliged to lead^q." The Spartans were condemned to that sad and austere life from the instant of their birth. For fathers and mothers were not intrusted with the education of their children. They were obliged to place them as soon as born in the hands of a certain number of persons appointed to the care of their bringing up. All the children of Sparta were, in consequence, fed, clothed, and lodged, in a word, brought up in a uniform manner. Nothing, moreover, could be more hard and rigid than the education they received. They never allow-

¹ See *supra*, book 4. chap. 3. p. 159.

^m Plut. in Lycurg. p. 54.; Ælian. var. hist. l. 13. c. 19.

ⁿ Plut. in Lycurg. p. 50.

^o Ibid. p. 54. & 55.

^p See Plut. *ibid.* p. 46. 51. 55.

^q Ælian. var. hist. l. 13. c. 38. See also Athen. l. 4. c. 6. p. 138.

ed them more than one very slight and very slender meal, scarce sufficient to support them. They were forced to go continually without shoes and stockings, covered in all seasons with a simple cloak. For the most part, they were even forced to perform their exercises entirely naked. They were besides very ill lodged, and deprived of every kind of amusement and recreation, which is customary to allow youth. In school they continually proposed grave questions, which they were obliged to answer justly and quickly. If not, they might expect to be punished grievously, and without mercy. It is thus that children at Sparta were held in perpetual confinement and constraint, without being able to find any place where they might be a single moment without some body after them to check and to chastise severely, even the slightest faults^r.

The pedantic rigour of the Spartan discipline had but too much influence on the manners of the inhabitants. It had made them contract a harsh and severe character, let us even say a fierce and cruel one. I need bring no other proof of it than the behaviour of the Spartans to their slaves, so well known in antiquity by the name of *Helots**. They treated them with more hardness and barbarity than a civilized nation would treat brute beasts^r.

Their masters were expressly forbid to give them their liberty, or to sell them out of the territory of Laconia^r. The Spartans carried their cruelty so far, as to oblige the *Helots* to receive a certain number of lashes every year, without having deserved them, only with a view of keeping them in mind of their obedience. If any one of these un-

^r Xenoph. de rep. Laced. p. 393. 394. 395.; Plut. in Lycurg. p. 46. 50. 51.; Cicero, Tuscul. l. 2. n. 14.

* The origin of the name *Helots* was probably this. Helos was an ancient city of Laconia, which, under some pretence, the Spartans attacked, and, on their becoming masters of it, they reduced all the inhabitants of it to slavery. The Spartans, in process of time, by new conquests making new slaves, they called them all *Helots*. Thus this particular name became a general denomination for all who were afterwards reduced to slavery amongst the Spartans, see Acad. des inscript. t. 23. m. p. 281.

^r See Plut. in Lycurg. p. 57.; Athen, l. 6. p. 272. A. l. 14. p. 657.

^r Acad. des inscript. t. 23. m. p. 275.

happy slaves seemed, by his advantageous mien, or the beauty of his shape, to rise above the condition he was born in, they put him to death ; and his master was fined, in order that he might take care, that, by his ill treatment of the rest of his slaves, none of them might thereafter offend the eyes of the Spartans by their exterior qualities. A cap and a coat of dogs skin was all the cloathing of the Helots. They could punish them for the smallest fault ; and however inhumane was the treatment they met with, these unhappy slaves had no power to reclaim the authority of the laws. Such was the excess of their misery, that they were at the same time the slaves of the public and of private people. They were lent in common. In fine, for the height of contumely and abasement, the Helots were often forced to drink to intoxication, and in that condition were exposed to the eyes of the young people, in order to inspire them with horror for a vice which so much degrades human nature.

The Spartans even often joined perfidy to cruelty to destroy these unhappy victims, when their number increasing too much gave cause to fear their undertaking some enterprise. History informs us, for example, that, on a certain occasion, the Lacedæmonians, anxious about the number of Helots which were dispersed throughout the state, and seeking to get rid of them without risk, pretended to give freedom to many of them, in order, as they said, to incorporate them afterwards in the troops. Under this pretext, they gave out, that the most robust and most valiant of the Helots had only to present themselves to be inrolled. On this news, a multitude assembled full of courage and of good-will. Amongst those who offered themselves, they picked out two thousand whom they regarded as the most capable of any great enterprise. They crowned them on the spot with flowers, and led them in great pomp into the temples of Sparta ; but soon after these

two thousand Helots disappeared, without its ever being known what became of them^u.

On another occasion, some Helots condemned to death for we know not what crime, took refuge at Tænaros, a promontory of Laconia, where Neptune had a temple greatly revered. The ephori were not afraid to drag them thence, and lead them to execution. That action has appeared shocking even to profane authors. They all looked upon the earthquake which then happened, the most horrible that had been heard of, as the effect of the resentment of Neptune against the Spartans, who had dared to violate the asylum of Tænaros^x.

What shall we say, in fine, of that abominable institution, designed in ancient authors under the name of the *ambuscade*? Here is their account of it. From time to time, those who were appointed to govern the youth of Sparta, chose out amongst their pupils some of those who appeared the boldest and most prudent. They armed them with poniards, and gave them necessary victuals for a certain number of days. In this plight, they sent these young people to beat the fields each on his own side. These scouts thus dispersed, had orders to hide themselves in the day-time, in covered places or caverns. As soon as night came, they quitted their ambuscades, and took the high roads, where they slaughtered all the Helots they met; a cruelty by so much the more easy to commit, as the wretches they attacked were not allowed to carry arms. Sometimes even these assassins marched in plain day-light, and killed such of the Helots as appeared the strongest and most robust^y.

The cruelty and treachery which the Lacedæmonians used towards their slaves, was also very familiar to them towards all whom they thought it their interest to oppress. I have cited a very striking example of it in the preceding

^u Thucyd. l. 4. n. 80. p. 285.; Diod. l. 12. p. 525.; Plut. in Lycurg. p. 56.

^x Acad. des inscript. *loco cit.* p. 275.

^y Plut. in Lycurg. p. 36. See also Athen. l. 14. p. 657.

book ^a. But it may not be improper to produce some others.

Alcibiades, whose courage and capacity were known to the Lacedæmonians, had been obliged to go seek an asylum with the younger Cyrus, brother of Artaxerxes, King of Persia. He was not long there without penetrating the secret designs of this prince, and discovering the object of the preparations he saw him make. Taken up with the means of raising his oppressed country, Alcibiades thought he should infallibly succeed, if he could inform Artaxerxes of the projects which Cyrus plotted against him. In effect, a discovery of that importance could not have failed to conciliate the favour of the monarch, and he would have undoubtedly obtained the succours he had need of for the re-establishment of the affairs of Athens. Full of these ideas, Alcibiades took the road to Persia. But the Lacedæmonians advertised of the motives of his journey, and convinced that their affairs were ruined without resource if they did not find means of getting rid of Alcibiades, they employed for that end the blackest of all villanies. This great man was then in the government of Pharnabazus. The Lacedæmonians wrote to that satrap, to engage him to deliver to them, at any price whatsoever, an enemy so formidable. Pharnabazus gained over by their offers, and their promises, served them to their wish, and caused Alcibiades to be assassinated ^a.

The manner in which the Lacedæmonians used the advantages they had obtained over the Athenians in the Peloponnesian war, were alone sufficient to cover them for ever with infamy and disgrace. In that city, so dear to all Greece, they exercised the most horrible cruelty. They put to death, says Xenophon, more persons in eight months of peace than the enemies had killed in thirty years of war ^b. All that then remained at Athens of persons of a-

^a Chap. 2. p. 177. See also Ælian. var. hist. l. 6. chap. 7.

^a Cornel. Nepos, in Alcibiad. n. 9. &c.; Diod. l. 14. p. 647.; Plut. in Alcibiad. p. 213.; Justin. l. 5. c. 8.

^b Xenoph. de reb. gest. Græc. l. 2. p. 278.

ny distinction, left it to seek some where an asylum where they might live in safety. The Lacedæmonians had the inhumanity to endeavour to deprive these unhappy fugitives of that last resort. They forbade by a public edict the cities of Greece to give them shelter, commanded that they should deliver them to the thirty tyrants who then ravaged Athens, and condemned to a fine whosoever should oppose the execution of this cruel edict^c.

The conduct which the Lacedæmonians, nearly about the same time, observed with regard to Syracuse, proves still better with what spirit that people was animated, and what were the fundamentals of their policy. The Syracusans were then disputing their liberty against Dionysius the tyrant, and had just received a considerable check. In these circumstances, the Lacedæmonians deputed one of their citizens to Syracuse, in appearance to testify the part they took in the misfortune of that town, and to offer succours; but in reality to strengthen Dionysius in the resolution of maintaining himself, and bringing his enterprise to an issue, hoping that this prince once become powerful would be of great use to them for the future^d. In fine, Herodotus says plainly, speaking of the Lacedæmonians, that those who knew the genius of that people, knew well that their actions commonly contradicted their words, and that they could in no manner be trusted^e. What ideas must such traits as these give us of the character of the Lacedæmonians?

I pass over in silence a reproach that might be made them on still better grounds for their barbarity to their children. Every year a feast was celebrated in honour of Diana, and then all the children of Sparta were whipped till the blood ran down upon the altars of that inhuman goddess. What brutality! thus to lacerate the bodies of these innocent victims, under pretence of accustoming them to support pain without impatience? They carried it to such

^a Diod. l. 14. p. 641. &c.; Justin. l. 5. c. 9.; Plat. in Lyfandr. p. 448.

^d Diod. l. 14. p. 646.

^e L. 9. n. 53.

excess, that some were often seen to expire in that cruel ceremony. It was performed in presence of all the city, under the eye of fathers and mothers, who beholding their children all covered with blood-sores, and ready to give up the ghost, exhorted them to endure the number of lashes that were to be inflicted^f, without sending forth a cry, or giving the least sign of pain. What name shall we give to this pretended fortitude?

What, moreover, shall we think of that obstinate and exasperated animosity with which the youth of Sparta fought with each other on certain days of the year? They divided themselves into two bands, which repaired by different roads to a certain place before agreed upon. The signal given, these young people fell upon each other tooth and nail, hand and foot, kicking, cuffing, and biting with all their force, and even tearing out each other's eyes. "You see them," says Pausanias, "fight it desperately, sometimes one against one, sometimes by little bands, sometimes, in fine, all together, each troop making the utmost efforts to drive back the other, and overthrow it in the water which surrounded the field of battle^g."

Again, what shall we say of that more than inhuman courage, with which, at Sparta, a mother received the news of the death of her children slain in battle? That loss not only extorted no fear, but it even caused a certain joy and satisfaction, which she hastened to shew in public^h. These same women, however, testified the greatest dejection and most abject pusillanimity, when they saw Epaminondas, after winning the battle of Leuctra, march straight to Sparta. They ran up and down all in despair, filling the air with lamentable cries, and caused more disorder and confusion than the enemies themselvesⁱ. What was then become of that ferocious courage, and that barbarous ostentation, with which the Spartan women delighted to

^f Cicero, *Tuscul.* l. 2. n. 14.; Nicol. Damascen. in excerpt. Vales. p. 522.; Plut. in *Lycurg.* p. 51.; Paus. l. 3. c. 16.

^g L. 3. c. 14.

^h Plut. in *Agefil.* p. 612.; Ælian. var. hist. l. 12. c. 19.

ⁱ Xenoph. de reb. gest. Gr. l. 6. p. 370.; Plut. in *Agefil.* p. 613. C.

insult nature on such ill-timed occasions as those which informed them of the loss of their children?

I cannot also omit taking notice of that examination which they made, at Sparta, into the constitutions of newborn children. As soon as a boy was born, he was carried into a certain place where he was visited by the elders of each tribe. If he appeared to them to be delicate, weak, in a word, of a constitution which did not promise, in appearance, firm and vigorous health, they condemned him to perish without pity, and he was thrown directly into a quagmire situated at the foot of the mountain Taygeta *.

What has been said is, I think, sufficient to prove that on all occasions the Spartans seem to have been bent to stifle the voice of nature and the cries of humanity, often even in contradiction to all reason and prudence. In effect, we are taught by experience, that many children whom it was thought impossible to rear for some days after their birth, have enjoyed, as they grew up, the firmest and most robust state of health. Without going from Sparta, we have a convincing proof of this in the person of Agefilaus. This prince, who was born lame, and came into the world with a complexion so feeble and so delicate in appearance, that they had no hopes of being able to rear him; Agefilaus notwithstanding lived fourscore and four years; and in the course of that career, what services did he not render his country †?

The austerity, and, if I dare call it so, the pedantry of the laws of Lycurgus, might make us believe that chastity was one of the principal virtues which he had taken care to inculcate into his people; but in this respect we should be greatly mistaken. How astonishing is it to see, that this famous legislator had not so much as thought of making public decency and decorum respectable? To what a degree must not the use of public baths, common to men and women, have been destructive of all modesty, bashfulness,

* Plut. *loco cit.* p. 49.

† See Plut. in Agefil.

and decency of behaviour ^m? and then those plays where young persons of both sexes fought naked against each other, and danced promiscuously in the same condition ⁿ? What consequences had not all this on the manners of the Spartan women? They were vitious and dissolute to such a height, that the ancients have reproached the Spartans as shamefully distinguished by their debauchery from all the other people of Greece ^o; debauchery, moreover, authorised by the very laws of Lycurgus. This legislator seems to have studied to find means of abolishing all the ideas which should be entertained of conjugal fidelity.

An old man, for example, who had a young and handsome wife, might, without offending decency or the laws, offer her to a well-made and robust young man. And this old man was allowed to own and bring up as his own, the child that sprung from that adultery. This was not all. A lusty, well-shaped young fellow that saw another have a handsome and agreeable wife, might demand the husband's permission to have dealings with her, under the pretext of giving the state children, who should be well made and of good constitution; and a husband was not at liberty to reject such a demand ^p. In a word, the Lacedæmonians mutually lent their wives with the utmost ease, and without the smallest delicacy ^q. Their history furnishes an event on this subject which I think singular in its kind.

In the war which the Lacedæmonians declared against the Messenians, they bound themselves by the most terrible oaths, not to return to Sparta till they were revenged for the injury they had received. That war drew into length, and the Spartans had already been ten years before

^m Acad. des inscript. t. i. h. p. 102.

ⁿ Plut. p. 47. & 48.

^o Arist. de rep. l. 2. c. 9. p. 328. Euripides gives the Spartan women the epithet of *Ανδρομαχέαις*, *viros cupidissime appetentes*, Androm. v. 595. Theodoret reproaches them with having "been subject to satisfy their constitution " with whomsoever they thought good." De curand. Græc. affection. l. 10. p. 630.

^p Xenoph. de rep. Lac. p. 393. ; Plut. in Lycurg. p. 49. ; in Numa, p. 76.

^q Nicpl. Damascen. in excerpt. Vales. p. 522.

Messene, without being any thing farther forward. They began then to apprehend that a longer absence would insensibly unpeople their city. To obviate this inconvenience, they took the strange revolution of sending back to Sparta, all those who had joined the army since their taking the above-mentioned oath, and to abandon to them the wives of the other Spartans who were bound to remain before Messene *. Those who sprung from that illegitimate commerce, were called *Parthenians*; a name expressive of the origin and cause of their birth †.

The known indecency of dress of the Spartan women, was a natural consequence of the bad education they received, and of the little care that was taken to inspire them with those sentiments of modesty and reserve so becoming in the sex. Their robes were made in such a manner that they could not move a step without discovering their legs, and even their thighs ‡; an immodesty exclaimed against by all writers of antiquity §. Aristotle wisely observes, that the little regard they had at Sparta for bashfulness and decorum, was the source of all the disorders that reigned in that city ¶. In the *Andromache* of Euripides, Peleus reproaches Menelaus with being the cause of the dissolute conduct of Helen by the bad education he had given her x.

These women however, such as they were, governed the

* Justin. l. 3. c. 4. says very plainly, that it was on the complaint of their wives who by no means agreed with so long a widowhood, that the Spartans took the resolution I speak of. See also Strabo, l. 6. p. 427. & 428.

† Justin. l. 3. c. 4; Diod. l. 15. p. 54.; Strabo, l. 6. p. 427. & 428.; Servius ad *Æneid.* l. 3. v. 551.

‡ Virg. *Æneid.* l. 1. v. 315. 320.; Plut. p. 76. & 77.

§ See Plut. in Numa, p. 76. & 77.; Clem. Alex. *pædag.* l. 2. p. 233.; Pollux. l. 7. c. 13. segm. 55.

¶ De rep. l. 1. c. 9. p. 328.

x Act. 3. scen. 2. vers. 595. &c. We might conclude from this fact, that the disorder of the women at Sparta was as old as the most ancient ages of Greece; and I am much inclined to believe it. Perhaps also Euripides makes Peleus speak on that occasion only relatively to the indecency which reigned in the manners of the Spartans when that tragedy was composed. However that may be, Lycurgus is extremely blameable for not having remedied that disorder, and for having, on the contrary, authorised it by his laws.

minds of their husbands with the most absolute dominion. They not only ruled in their own houses, but also the whole state. The Spartans communicated to their wives the closest and most important secrets of the state. They even did it with less reserve than those would converse with their husbands on their private and domestic affairs^y. Accordingly Aristotle asserts, that it was never possible to reform and regulate the manners of the Spartan women, because of the too great ascendant they had acquired over their husbands^z: An ascendant the more astonishing, as the Spartans, like all the Greeks, appear to have been singularly addicted to that abominable passion, as unnatural as opposite to the mere light of nature^a. Yet the sex at Sparta was in general very beautiful^b.

Let us sum up, from all we have said, the general and ruling character of the Lacedæmonians. These were, without contradiction, the bravest, the most warlike, the best skilled in the art-military, the most politic, the firmest in their maxims, and most constant in their designs, of all the people of Greece: but at the same time they were an imperious and austere people, deceitful, intractable, haughty, cruel, and perfidious, capable, in a word, of sacrificing every thing to ambition and to interest, and holding in contempt the fine arts and the sciences. Accordingly Lycurgus appears to have been solely occupied with the care of strengthening their bodies, and to have entirely neglected the forming of their hearts, and cultivation of their minds. Let us not therefore wonder that the character of the Lacedæmonians, naturally rugged and austere, often degenerated into ferocity; a vice which sprung from their education, and which alienated the good-will of all their allies. A people who passed their whole lives in correcting or being corrected by others^c, in giving grave

^y Arist. de rep. l. 2. c. 9.; Plut. in Lycurg. p. 47. 58.; in Numa, p. 77.; In Agid. & Cleom. p. 798.

^z See Plut in Lycurg. p. 50. & 51.; Xenoph. de rep. Laced. p. 395.

^a Id. ibid. ^b Athen. l. 13. p. 566.

^c See Xenoph. de rep. Laced. p. 394. 395. & 396.; Plut. in Lycurg. p. 46. 50. 51. 55.; Meurs. miscellan. Lac. l. 2. c. 3.

precepts,

precepts, or receiving them from rigid censors, who always mingled austerity with their lessons; such a people, I say, could never contract a mild and humane behaviour, or render their private conversation agreeable. In a word, the Spartans seem to have been obstinately blind to the most valuable endowments of human nature ^a. Such were the manners, such the genius of a people admired by all antiquity, and proposed by profane authors as a model of wisdom and virtue.

Sparta, moreover, offers a very striking example of the facility with which men run always into extremes. When, by the victories of Lyfander, the use of gold and silver was introduced into that republic, and had banished the ancient austerity of manners, then did these famous Spartans directly abandon themselves to all the excesses of luxury and debauchery. The softest and most magnificent beds, the easiest and most delicate cushions, the most exquisite wines and perfumes, the nicest meats, the richest and highest wrought plate, the rarest and most superb tapestry, none of these were too good for the Spartans ^e. Nothing besides could appease their insatiable cupidity. It was then a proverb in Greece, that gold and silver were indeed seen to enter Sparta, but no one ever saw these metals return.

A R T I C L E II.

Of the Athenians.

THE manners of the Athenians offer the most striking and direct contrast with those of the Lacedæmonians. It were even difficult to find a wider difference between any two cities, however distant, than was in the character and common customs of civil life amongst the Athenians and the Lacedæmonians. These two cities were nevertheless

^a See Arist. de rep. l. 8. c. 4.

^e See Athen. l. 4. p. 141. & 142.; Plut. in Agid. & Cleom. p. 796.

near enough neighbours, and made equally a part of one and the same nation. But by so much as men's actions and even their thoughts, if we may say so, were constrained and limited at Sparta, by so much were they free and independent at Athens. In a word, these two republics were actuated by views altogether opposite, and by principles entirely different. The reader will soon see a very plain proof of this, in the few details which I shall give of the manners and customs of the Athenians.

An Athenian was free to feed, clothe, and lodge himself as he would. He was also at liberty to give himself to any art or science that he thought proper. In fine, the choice of his occupations was not regulated or restrained by any law. He might pass his time in the manner that appeared to him the most convenient, provided it was not in absolute idleness. In this respect Athens and Lacedæmon thought very differently of the private life and daily employments of their citizens. We have seen, that Lycurgus had forbid the Spartans to apply to any mechanic art, to busy themselves with any domestic œconomy, and even to cultivate the sciences. By this means he had imposed the hard necessity of passing the greatest part of their lives in idleness and want of work. Solon, more enlightened than Lycurgus, had, on the contrary, been sensible, that sloth and too much leisure are more to be feared than all the vices that can reign in a state. It was to prevent the introduction of those that he appointed the Areopagus to watch the private conduct of the inhabitants of Athens, and to take cognisance of the means which individuals employed for their subsistence. This legislator had even ordained punishments for those who should pass their lives in entire idleness^r.

The effect of a police so wise and so attentive, was the flourishing at Athens of the fine arts, of manufactures, of commerce, of navigation, sciences, eloquence, in short, of all the knowledge which can advantageously distinguish a na-

^r Plut. in Lycurg. p. 54; in Solon. p. 90. E.; in Apophthegm. Lac. p. 221. C;

tion. But at the same time, the great riches introduced into Athens by arts and commerce, produced the same effects that they have always produced amongst all nations. I would say an excessive inclination for pageantry, luxury, and magnificence, joined to an extreme love of pleasure and sensuality. Athens, after Solon's time, very soon became a voluptuous city, and its inhabitants yielded but too readily to the allurements of sensual pleasure.

The tables of rich and opulent persons were served with exquisite luxury. The extensive commerce of the Athenians enabled them, as Xenophon remarks, to live voluptuously, and to procure all the delicacies which foreign countries could then supply ^g. We must however do justice to this people. It appears, that, in general, the Athenians were rather dainty and delicate, than addicted to gluttony and drunkenness. I do not find in antiquity, that they were ever taxed with committing excesses in eating and drinking; we can even assert, that the common people were sober and frugal ^h. Let us say further, that among the Athenians the greatest festal pleasure consisted in a flow of learned, sprightly, and polite conversation, as agreeable, in a word, as useful and interesting. The banquet of Plato and that of Xenophon give us a model of the ordinary table-talk of the Athenians, and it is thus that they prevented the two extremes of licentious mirth and irksome weariness, which preside but too often at most long meals.

To the charms of conversation, the Athenians added, in their repasts, that of listening to the recital of some poetical performance, or of hearing some skilful musician sing, accompanied with his lyre; often even they introduced male and female dancers into their banquetting-room. Music and dancing, among these people, made one of the principal and most usual entertainments at their feasts. For the rest, we know, that the women did not eat with the

^g De rep. Athen p. 405.

^h See Potter Archeolog. l. 4. c. 18. p. 743.; Casaubon. in not. ad Athen. l. 2. c. 8.

menⁱ, and that supper was the favourite meal of the Athenians^k. Let us add, that they eat crowned with flowers, and lying upon beds^l.

The Athenians were very magnificent and curious in their drefs. They wore long robes of linen extremely fine, dyed purple or other precious colours^m. Beneath these robes they had tunics of various forms and kindsⁿ. Their fingers were loaded with jewels and rings of great price. They wore magnificent girdles, rich and elegant buskins^o. Their hair was very artfully arranged, curled, and laid back round the forehead by hooks of gold, made in the form of grasshoppers^p. For the rest, it does not appear, that the Athenians were in use to cover their heads, or that they wore any thing that could serve for that purpose^q. This luxury and magnificence of dress extended even to the slaves. Xenophon tells us, that a citizen of Athens could scarce be at all distinguished from a slave by the richness of his cloathing, or by any other external mark^r.

We have seen, in the second part of this work, that anciently the Greeks went always armed. The Athenians were the first who renounced that barbarous and ferocious custom. From the time that they believed public safety and tranquillity well established in their state, they ceased to go continually girded with a sword, and no longer wore it, except when going to war^s.

The ladies of Athens were very careful of their drefs, and commonly employed the whole morning in it. Their toilette consisted of numerous articles. They made use of paint, and of all such drugs as they imagined proper to cleanse and beautify the skin. They took also great care of their teeth, blackened their eye-brows, and applied red to

ⁱ See Lucian, Plutarch, &c.

^k Plat. Xen. Plut. &c.

^l Potter Archeolog. l. 4. c. 20.

^m Thucyd. l. 1. p. 6. n. 6.; Clem. Alex. Pedag. l. 2. p. 233.; Athen. l. 12. p. 512.

ⁿ Athen. *loco cit.*; Plato in Hippias, p. 255.

^o Plato, *ibid.*

^p Thucyd. Clem. Alex. Athen. *loco cit.*

^q See Lucian in Anacharsis, n. 16.

^r De rep. Athen. p. 403. ^s Thucyd. l. 1. p. 6. n. 6.

their

their lips. The art of composing head-dresses, was their principal occupation. They employed the most precious essences in perfuming their hair, which they commonly dyed black or some other colour, and then arranged in various curls by means of hot irons. A part of it was laid back and disposed upon the forehead, the rest was suffered to flow loose, and play negligently upon the shoulders. The dress of the legs and feet of the Athenian ladies was also extremely neat and elegant. As to their cloaths, they were composed of extremely light and fine stuffs. They took care to have their robes always close upon the bosom, and that they should advantageously shew the shape[†].

We do not find with all this, that the women of Athens were ever reproached in antiquity with the same indecency of dress, the same depravation of manners, or the same ambition as the women of Sparta. As to this last article, especially, it does not appear, that the Athenian women had any influence in the government of the state. They lived, in general, very retired in their apartments, scarce ever appearing in public, and without having any free communication with men, a custom which had place amongst most of the people of Greece.

I have shewn elsewhere, that, amongst the Athenians, the external architecture of their houses could not have any great appearance or splendor[‡]. But in the inside, they were highly finished and very voluptuous. The rich spared nothing to procure themselves, in that respect, all the conveniencies and all the ornaments possible. They had large gardens within their walls, disposed in the most commodious manner for the different bodily exercises, such as wrestling, running, &c. in which the Athenians greatly employed themselves. They had also bathing-rooms, with all that belonged to them necessary for refining upon that pleasure^{*}. The taste which the Athenians had for painting, sculpture, and, in general, for all the arts of luxury and delight, does not permit us to doubt, that their apartments were furnished

[†] Lucian. Amor. n. 39. & 40.

[‡] Supra, book 2. c. 3. p. 87.

^{*} Xenoph. de rep. Athen. p. 405.

with pictures, statues, and rich vessels. We know also, that part of the luxury and sumptuousness of these people consisted in the beauty and richness of the beds and of the carpets which they spread upon their floors and their seats.

Although the marine was the principal occupation of the inhabitants of Athens, and men of all ranks took upon them to handle the oar^y, yet was this people by no means affected with that roughness which seamen are generally accused of. On the contrary, nothing is more celebrated in antiquity, than the politeness of the Athenians: A politeness which reached even to the dregs of the people. The Atticism distinguished the inhabitants of Athens, as much as the urbanity did afterwards distinguish the inhabitants of Rome. I own, however, that it is difficult to find that politeness and that delicacy of taste so boasted of, in those obscenities which were continually heard in the theatre of Athens. The comedies of Aristophanes are full of gross images, which amongst us the most impudent and dissolute man would be ashamed of. I shall say the same of those bitter railleries, of those gross and indecent sallies which were uttered in the public assemblies. Nothing is more distant from the idea which we must naturally form of politeness, than the manner in which Æschines and Demosthenes treat each other in their harangues. They interchange the most atrocious abuse. I should think, moreover, that these faults may be attributed to the form of government of Athens.

In republics men easily agree to look upon unbounded headlong liberty as the most precious attribute of humanity. They usually make perfect equality consist in unlimited freedom of speech. This sentiment always imprints on republican spirits a certain asperity which must necessarily affect the manners.

I have already told the reader, that there were few towns in Greece where the taste for pleasure was more lively than at Athens. They were passionately fond of feasting, hunting, music, dancing, and particularly of theatrical representations.

^y Xenoph. de rep. Athen. p. 404.

tations. The Athenians had also other sorts of public spectacles. These were the parades and religious processions which on certain days of the year were made with great ceremony, pomp, and magnificence. The gay youth of Athens had also their particular tastes, as is usual in all rich and opulent cities; they were fond of splendid frolics, of uncommon kinds of dogs, of having fine horses and many of them; of keeping courtesans and female dancers^z. The children of Pisistratus were accused of introducing into Athens a taste for debauchery and libertinism^a. The courtesans however were in great favour in the time of Solon^b. It was, to speak of it by the by, the only idea the Athenians had of gallantry. For never did the Greeks know real love, nor any thing belonging to it. Their hearts and minds were absolutely abandoned to that detestable passion so totally opposite to the taste for women^c, with whom, besides, the men lived not in domestic society.

We must allow, however, that notwithstanding the disorders of the youth, inevitable in great cities, decency of manners and public decorum were very much respected at Athens. A citizen who had been seen to enter a tavern to eat and drink, was dishonoured for ever. No more was necessary to cause a senator to be banished from the Areopagus^d. An archon convicted of being drunk, was for the first time condemned to a heavy fine, and in case of relapse, was punished with death^e. History has even handed down two remarkable examples of the respect which the Athenians had for public decency and modesty. In the war which Philip King of Macedon carried on against them, one of his couriers was seized. They read all the letters he carried, except those which Queen Olympia the wife of Philip had

^z See Plut. in Alcibiad.; Athen. l. 12. p. 532.

^a Athen. *ibid.* Pisistratus was cotemporary with Solon.

^b Athen. l. 13. p. 569.

^c See Herodot. l. 1. n. 135.; Plut. in Solon. p. 79. in Themist. et Alcibiad. *passim.*; Cicero Tuscul. Quæst. l. 4. n. 33.; Lucian *passim.*; Athen. l. 13. p. 564. & 601.; Menag. in not. ad Diog. Laert. l. 1. n. 55. p. 32.

^d Athen. l. 13. p. 566.

^e Diog. Laert. in Solon. l. 1. n. 57.; Pollux, l. 8. c. 9. segm. 89.

wrote him. Those the Athenians sent back to that prince with the seals unbroken, being stopped from opening them by the consideration of the respect which is due to the secrets which may be between husband and wife^r. The same Athenians having ordered, that strict search should be made after the presents which Harpalus, by order of Philip, had distributed to the orators of the city, they did not permit the house of Callicles, who was then newly married, to be searched, and that out of respect for his spouse, who was then lodged there^s.

I forgot to put in the number of the common pleasures of the Athenians, that of their walks, the chief delight of which always consisted in the charms of conversation. I shall moreover remark, that what we call play in our days, was scarce known at all to the ancients; and that is a very notable difference between their manners and ours. Their walks, and their various bodily exercises, served them in place of it. Besides, as I have said, they did not live with the ladies.

As to the particular occupations of the Athenians, they cannot have failed of them. Commerce alone to which they were greatly addicted, sufficed to fill up a great part of their time. A good deal too was employed in soliciting and conducting their affairs; for these people were fond of chicane and law-suits^a. They were obliged, besides, to carry on intrigues to pay their court, and to instruct themselves in the private and public interests of the state, since every citizen of Athens had a share in the government of the republic. For this reason it is, that eloquence was so highly honoured amongst this people. It was eloquence that led the way to the highest offices, that ruled in the assemblies; in a word, that decided every thing, and gave an almost sovereign power to those who possessed the talent of fine speaking. To the study of rhetoric, the Athenians usually joined that of philosophy, and under that denomination we ought to com-

^r Plut. in Demosth. p. 893.

^s Id. *ibid.* p. 857.

^a See the wasps of Aristophanes, and Casaubon, in Athen. l. 14. c. 10. p. 910.

prize all the sciences which compose or have any relation to it.

Furthermore, though the education and way of living at Athens was so different from those of Sparta, the Athenians were not essentially less brave or less warlike than the Spartans. The battles of Marathon, of Salamin, and of Platea, without mentioning a number of other very memorable actions, are testimonies of the bravery and magnanimity of the Athenians sufficiently authentic to make it needless to insist upon it. They are perhaps the only nation in the universe who, according to the remark of Athenæus, clothed in purple, and decked in all the ornaments of dress, have beaten and dispersed formidable armiesⁱ. Glory had the same effect on the minds of the Athenians, that discipline produced in those of the Spartans. For never people had more of a sense of honour, or were more greedy of glory and of praise, than were the Athenians.

If there was the greatest opposition between the manners of the Athenians and those of the Lacedæmonians, there was, if the expression may be allowed, still more between the essence of their genius and of their character. Cruelty was the ruling propensity of the Spartans, mildness was in general the ground of the character of the Athenians. The difference between them, in this respect, is easily seen in the manner of treating the slaves amongst each of the two people. I have already shewn to what excess of outrage the Spartans were carried against their slaves. The Athenians, on the contrary, treated them with great humanity. Their condition was infinitely more gentle at Athens than in any other city of Greece^k. They had an action against their masters on account of outrage and ill usage^l. If the fact was proved, the master was obliged to sell his slave, who, while the process depended, might retire into an asylum destined to secure him from all violence^m. The liberty of which the Athenians were so jea-

ⁱ Athen. l. 12. p. 512.

^k Demosth. Philipp. 3. p. 383.

^l Athen. l. 6. p. 266. & 267.

^m Plut. de superst. p. 166. in Thes. p. 17. ; Pollux. l. 7. c. 2. segm. 13.

lous, was not interdicted to the slaves. They could purchase their freedom in spite of their masters, when once they had amassed the sum which the law had fixed for that purpose^a. It was not even unusual for a patron who was content with the services of his slave, to give him his liberty for reward.

The humanity of the Athenians extended even to beasts. Plutarch relates, on this subject, a singular fact which is a strong instance of the general good nature of this people. When the construction of the temple named *Hecatonpedon* was finished, the Athenians ordained, that all the beasts of burthen should be set at liberty that had been employed in that work, and that they should be suffered to feed at pleasure in the best pastures for the rest of their life. A mule who conformably to that ordinance had been left at full liberty, coming of its own accord to present itself to work, and heading those who drew the carriages for the citadel, the people charmed with that action, made a decree that the mule should be particularly taken care of, and fed at the expense of the public^c.

These sketches, as I said just now, do honour to the character of the Athenians, and prove, that a great fund of mildness and good nature reigned in the minds of this people. But we might cite others which equally shew, that, on many occasions, the Athenians forgot these principles of humanity, and gave themselves up to the most cruel excesses that rage and giddy fury could inspire. What shall we think, for instance, of the barbarity with which they put to death the heralds sent by Darius to summon them to submit to his dominion^b? On that occasion, they violated equally the rights of nations and those of humanity. What name also shall we give to the fury with which the Athenians condemned to death ten of their generals, who could be reproached with no other crime than having neglected, after a victory at sea, to stop to pick up the floating bodies

^a Plaut. in *Casim.* act. 1. scen. 2.

^b In *Catone*, p. 339. See also *de solert. animal.* p. 970.

^c See *Herodot.* l. 7, n. 133.

of their soldiers, that they might pursue the enemy with more ardour, and finish his entire defeat? I could still touch upon other facts as dishonourable for the Athenians; such, for example, as the equally unjust and cruel manner of condemning Socrates to death. This judgment will in all ages be a blot that all the lustre of their glorious actions will never be able to efface. Such an infamy can only be attributed to that inconstancy and fickleness which presided for the most part over all the proceedings of the Athenians, and rendered this people susceptible of all impressions.

It is certain, that the Athenians in general had as much wit as any people ever had; but, if we may be allowed to say it, they had too much of it, and to such a degree as to outrun their judgment. They were not enough on their guard against their imagination, which often carried them beyond all just bounds. Hence comes their singular inclination for fables and chimeras. They were extremely fond of hearing them, provided they were gracefully presented, and delivered with wit. To this taste for singular and extraordinary facts, is commonly attributed, and with a good deal of reason, a great part of the tales which Herodotus has sown in his history. He knew the Athenians, and sought to please them. In that view, he has been less delicate and less scrupulous in the choice of facts than probably he would have been, without that desire of being read and admired by a people naturally fond of the marvelous and of the extraordinary. Do we not also know that Demosthenes was more than once obliged to have recourse to such like artifices to catch the attention of his audience, and that at times when no less than the safety of their country was at stake?

To define the Athenians in few words, they were a mild, humane, and beneficent people, magnanimous, generous, most brave and most warlike, having besides great talents for commerce and sea-affairs; but at the same time

^a Diod. l. 13. p. 623. &c.; Valer. Maxim. l. 1. c. 1. extern. n. 8.; Xenoph. de reb. gest. Græc. l. 1. relates this fact a little differently.

light, touchy, and capricious, hot-headed, haughty, and inconstant; polite, moreover, and delicate in point of decorum, the times of which I speak being considered, sensual and voluptuous, taken up with a fine picture, a beautiful statue, passionately fond of spectacles, lovers of the sciences and fine arts in every kind and branch; curious, in a word, of news, and very talkative, sprightly, humorous, fond of drollery and jests, of quick feelings, and expressing themselves with the most exquisite taste and delicacy; having produced besides many men of wit as brilliant as solid, and many great and sublime geniuses.

A R T I C L E III.

Of the plays or games of the Greeks.

I Should think I omitted an article essential to the knowledge of the manners of the Greeks, if I did not say something of the different plays established very anciently among these people. It is known, that by the term *plays* or *games* we are to understand those great and magnificent spectacles, where many bands of combatants disputed the prize in the various bodily exercises which made the subject of the plays I speak of. There was a considerable number of them established in several parts of Greece; but the most solemn were the Olympic, the Pythian, the Nemean, and the Isthmian games. These sorts of festivals were continued for many days. I shall not dwell upon the whole apparatus and all the ceremonies observed there, nor enumerate all the different combats, such as the wrestling, the pancratium, or mixed combat, the boxing, the race, the quoits, &c. in which they were exercised. My business is only to consider the end and motives of the establishment of these games.

I have already remarked elsewhere, that it was customary amongst almost all civilised people, to establish festivals and contrive public diversions, to qualify the fatigue and lassitude

lassitude which must be the consequence of continual application to work, or to remedy the lingering irksomeness inevitably and necessarily attached to a life of constant idleness. But the legislators justly persuaded that the multitude were too much the slaves of sense, and too little enlightened to be able to find sufficient recreation in intellectual amusements only, endeavoured to rouse and divert them by sensible and striking objects. In this view, they thought, in all times, of diverting the people by subjects proportioned to their understanding and taste; I mean by spectacles, whose outward show should strike the senses and produce strong impressions. But we also see, that most legislators gave their attention at the same time to the means of rendering these sorts of diversions useful and profitable.

These two motives are easily discovered in the establishment of the games of Greece. Those who instituted them, had not solely regarded the pleasure and amusement of the multitude. They had mingled, in these establishments, views of very wise and refined policy. Greece is in general a pretty hot country. We know that the temperature of such climates commonly renders the body soft and effeminate. By annexing ideas of the greatest glory to the succeeding in exercises, which demand great force and address, it was designed to render the body more pliant, stronger, and more vigorous than it commonly is in hot countries. They wanted thus early to prepare the youth for the painful toils of war, and at the same time to make them fitter to carry arms. By means of the exercises I speak of, the young people were accustomed to fatigue from their infancy, and were thus rendered more firm, more warlike, more intrepid, and more dexterous, especially in combats where strength of body and address generally decided the victory, as they did in ancient times; because, the use of fire-arms being unknown, they were commonly obliged to approach very near. The advantages which the Greeks drew from the different exercises to which they were enured from their infancy, appeared sensibly in the wars which they

had to maintain against the Persians. With a handful of men, they defeated innumerable armies. Herodotus pretends, that one single Greek maintained his ground against ten Barbarians^r. This great historian further observes, that those who signalised themselves the most in the battles of Marathon, of Salamis, and Platea, had almost all of them gained the prizes in the games I have spoke of^s.

Let us also remark, with what address the institutors of these games had found the art of exciting that noble emulation, and that generous ardour for glory, which are, and always will be, the best rampart and firmest support of a state. In the origin, the conquerors received for their whole reward only a simple crown of wild olive at the Olympic games, of laurel at the Pythean, of green smallage (a kind of parsley) at the Nemæan, and of dry smallage at the Isthmian games^t. The authors of these establishments had designed to inculcate, that honour alone, and not a fordid interest, ought to be the end and reward of victory. We may judge what might be performed by a people accustomed to be conducted by such principles. Tygranes, one of the principal officers of the troops of Xerxes, hearing talk of what were the prizes of the Grecian games, turned towards Mardonius, who commanded in chief the whole army of that monarch, and, struck with astonishment, exclaimed, "Heavens! with what men are you going to engage!" "insensible to interest, they combat only for glory." An exclamation full of sense and judgment, whose force and truth was unfelt by Xerxes^u.

In fine, the principal motive, and that which we should most admire in the establishment of the games I have spoke of, was the opportunity which these spectacles afforded all the inhabitants of the different cities of Greece of seeing each other, and continuing assembled for some time in the same places. It was, in effect, the part of prudence and sound policy, to procure these people all possible means of

^r L. 9. n. 61.^s L. 9. n. 104.^t Journ. des scav. Février 1751, p. 117.^u Herod. l. 8. n. 26.

uniting. The Greek nation, composed of a multitude of little states jealous and envious of each other, had need, for their preservation, of some common centre where all its inhabitants might often find themselves united and mingled indifferently with the most perfect equality. This is what happened in these games, whither repaired an incredible number of spectators from all parts of Greece. By this concourse was formed, without any apparent affectation, a sort of bond of correspondence, and, if one may call it so, a sort of confraternity, amongst the citizens of all the different Grecian cities. Too many occasions therefore could not be contrived for their being together, and seeing each other familiarly. I have already made the remark in speaking of the establishment of the council of the Amphyctions *.

But the institution of public games was still more proper to operate such a union and concord as I have spoke of. The diversions which they partook of at Olympia, and the other places where these games were celebrated, naturally disposed the minds to good humour and gaiety. They had daily occasion to see and converse with each other. It even often happened, that this familiarity and habitual commerce engaged many citizens of different republics to join in the bonds of hospitality. It is thus that they could without any formalities treat in a friendly manner of the reciprocal interests of each community. The Greeks at these times appeared to be, in a manner, inhabitants of one and the same city. They offered in common the same sacrifices to the same gods, and participated the same pleasures †. By this means they obtained the calming of grudges and terminating of quarrels, by stifling animosities. They had fair opportunities, in these grand assemblies, of effacing those popular prejudices which are often kept up only for want of knowing the nation against whom a prejudice is conceived.

* See part 2. book 1. chap. 3. art. 1.

† See Strabo, l. 9. p. 612.

Add to this, that, during all the time of these spectacles, there was a general suspension of arms throughout all Greece, that they might assist at them with more tranquillity and satisfaction. Then all hostilities ceased, and every movement of war was interrupted *. It is easy to perceive how much such a custom must have contributed to bring about a union of hearts, and cessation of troubles and divisions. The celebration of the games, by restoring peace and tranquillity for a time, readily disposed their minds to secure the advantages of them irrevocably. We regard the institution of the games of Greece in every respect as a masterpiece of policy and prudence.

It is true, that in after times this establishment, so wisely contrived, degenerated greatly from its primitive institution, and even gave room for strange abuses. The idea of rendering themselves useful to their country, and forming themselves to the use and handling of arms by bodily exercises, disappeared. The Athletes made a profession apart, which from thenceforth devoted their talents to the senseless desire of acquiring a vain-glory, and honours as sterile as frivolous. They entered the lists only as actors in a spectacle, to make show of their strength or address, and attract the applause of the public by diverting it. They carried the exercises beyond all bounds, and pushed the excess so far as to be continually in danger of losing their lives, or being crippled for the rest of their days *. Then might be justly applied to the games of Greece that bon mot so boasted amongst the ancients: "If it is seriously and "in good earnest that ye fight, ye do not do enough; but "if it is only in jest and for amusement, ye do too much." Let us remark further, that such spectacles were only fit to familiarise the spectators with violence and inhumanity. These combats must necessarily leave upon the mind impressions of cruelty and barbarity, the consequences of which are always extremely to be feared *.

It

* Thucyd. l. 5. n. 49. ; Plut. in Lycurg. p. 54. C. ; Pausan. l. 5. c. 20.

^a See Lucian. in Anacharsi.

* There is a celebrated nation in Europe which is reproached with a certain

It happened also, that the people taking too great a taste for that kind of amusement, went so far as to neglect for it their own proper affairs. They passed the time in seeing the set combats of the Athletes, who incessantly repeated their exercises, that they might appear with more success in the public and solemn games. The ambition of carrying the palm became at last a general and universal madness. They despised the study of the most useful and necessary arts, to occupy themselves entirely in useless trials of skill. The taste for gymnastics was a kind of epidemic malady which spread over all Greece. Gluttony and drunkenness soon joined that depravation of manners. These vices became, so to speak, the particular appendage of the Athletes. Those who originally had addicted themselves to that profession, regarded frugality as the most proper means for preserving their strength and address; they lived only on nuts, dry figs, and cheese^b. This too austere regimen displeased the masters of the lists, who rose insensibly throughout Greece, and formed at length a particular profession. They permitted their pupils the use of flesh. The most solid and succulent, such, in a word, as afforded the strongest and most abundant nourishment, was preferred to all other aliments^c. It can scarce be conceived to what excess the Athletes carried their voracity in the latter times. History says, that Milo Crotoniensis was not yet satisfied after having eat twenty minæ of flesh *, and as much bread, and drank three

certain ruggedness, let us even say a certain ferocity in their manners and conduct: may not one attribute the particular spirit which reigns in the nation I speak of, to the taste the people have preserved for spectacles of gladiators?

^b Plin. l. 23. sect. 63. p. 35. ; Paus. l. 6. c. 7. ; A. Corn. Celsus, l. 4. c. 6. ; Diog. Laert. l. 8. segm. 12.

^c *Autores supra laudati.*

* The twenty minæ of flesh amounts to more than 14 pounds Paris weight, and the congi of wine to ten pints and about a chopin of the same measure †. The story which the ancients tell us of the bull of four years old that Milo eat all up in a day, after having carried it upon his shoulders the length of a stadium, may, I think, be regarded as an idle fable. Athen. l. 10. c. 2. p. 412.

† See the table at the end of the first dissertation.

congi of wine ^d. Another of these Athletes eat to the rate of fourscore cakes a-day ^e. This sort of people at that time made a part of their superiority over other men consist in a monstrous and excessive voracity ^f.

Then also disappeared that disinterestedness so pure, so noble, and so absolute, which had originally animated the combatants. At first only a simple crown of laurel had been allotted to the conquerors for their reward. In the end, the privilege of being fed at the public expense was granted to such of the Athletes as had been victorious. They were not long of abusing it, even so far as to become a great burthen upon the cities and upon the people. This abuse appeared so heavy to Solon, that he thought himself obliged to remedy it, and reduce the pensions of the victorious Athletes. He assigned only 500 drachmas to those who had carried the prize in the Olympic games, one hundred to those who had been crowned at the Isthmian games, and so of the others in proportion ^g. This legislator found that it was shameful to give such sums to mere wrestlers, which it were much more just and more useful to employ in maintaining and rewarding the children of those who had fallen sword-in-hand in the service of their country ^h. To judge of the just contempt the Athletes had fallen into, we must hear Euripides. “Amongst the infinite evils which reign in Greece,” said this famous poet, “there is none more pernicious than the profession of the Athletes; for, in the first place, they are incapable of conduct. How, in effect, shall a man subject to his palate and become a slave to his belly, how can he procure a fund sufficient for the subsistence of his family? Moreover, the Athletes know not what it is to endure poverty by suiting themselves to fortune; for having no foundation of good principles, hardly do they

^d Athen. loco cit.

^e Theocrit. Idyll. 4.

^f See Athen. l. 10. c. 2.; et Galen. de dignost. puls. l. 2. c. 2.

^g Plut. in Solon. p. 91.; Diog. Laert. l. 1. segm. 55.

^h Id. ibid.

“change”

“change their character even in disgrace. I cannot,” continues Euripides, “approve the custom of the Greeks “of forming numerous assemblies to honour such frivolous “diversions. For let one of them excel in wrestling, “let him be nimble in the race, let him know how to “throw a quoit, or apply a vigorous blow on the jaw of “his antagonist, what is his country the better of these “fine talents, or of the honour he gains by them? Will “he repulse the enemy by the force of his quoit, or put “him to flight by exercising himself in the race armed “with a buckler? These follies are not the business of “the field,” &c. i. It is thus that the institution of the public games of Greece, that is to say, one of the finest and wisest inventions, was insensibly corrupted, and at last degenerated so far as to become a most pernicious abuse.

I must also take notice, that the best writers of antiquity have thought it just to attribute to the spectacle of the Athletes, that infamous passion to which the Greeks were but too much addicted. This sort of actors always appeared in public entirely naked. The nature of the exercises which made the subject of the games I speak of, joined to the heat of the climate, and the season of their celebration *, necessarily required them to be naked. The Athletes were accustomed to that indecency from their earliest youth; for to succeed in the profession which they embraced, they could not apply to it too early. The habit of appearing before each other continually naked, soon destroyed every sentiment of modesty, and introduced amongst the Greeks that horrible corruption with which they have been so often reproached †; a depravity which was moreover fomented by the little commerce and familiarity which subsisted in that nation between the sexes. I have already

† Acad. des inscript. t. i. m. p. 217. See also Lucian. in Anacharsi; Athen. l. 10. p. 413. 414. ; Plut. quæst. Rom. p. 274.

* It was in the month of July.

† *Mihi quidem hæc in Græcorum gymnasiis nata consuetudo videtur, in quibus isti liberi & concessi sunt amores.* Cicero, Tusc. ul. quæst. l. 4. n. 33. Ennius had said before Cicero, *Flagitii principium est nudare inter cives corpora.* Apud Cicer. loco cit. See also Plut. t. 2. p. 274. 751.

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^b Theocrit. Idyll. 4.

^c See Athen. l. 12. c. 2.; et Galen. de dignost. puls. l. 2. c. 2.

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^d Id. ibid.

" change"

“change their character even in disgrace. I cannot,” continues Euripides, “approve the custom of the Greeks “of forming numerous assemblies to honour such frivolous “diversions. For let one of them excel in wrestling, “let him be nimble in the race, let him know how to “throw a quoit, or apply a vigorous blow on the jaw of “his antagonist, what is his country the better of these “fine talents, or of the honour he gains by them? Will “he repulse the enemy by the force of his quoit, or put “him to flight by exercising himself in the race armed “with a buckler? These follies are not the business of “the field,” &c. i. It is thus that the institution of the public games of Greece, that is to say, one of the finest and wisest inventions, was insensibly corrupted, and at last degenerated so far as to become a most pernicious abuse.

I must also take notice, that the best writers of antiquity have thought it just to attribute to the spectacle of the Athletes, that infamous passion to which the Greeks were but too much addicted. This sort of actors always appeared in public entirely naked. The nature of the exercises which made the subject of the games I speak of, joined to the heat of the climate, and the season of their celebration *, necessarily required them to be naked. The Athletes were accustomed to that indecency from their earliest youth; for to succeed in the profession which they embraced, they could not apply to it too early. The habit of appearing before each other continually naked, soon destroyed every sentiment of modesty, and introduced amongst the Greeks that horrible corruption with which they have been so often reproached †; a depravity which was moreover fomented by the little commerce and familiarity which subsisted in that nation between the sexes. I have already

† Acad. des inscript. t. 1. m. p. 217. See also Lucian. in Anacharsi; Athen. l. 10. p. 413. 414. ; Plut. quæst. Rom. p. 274.

* It was in the month of July.

† *Mihi quidem hæc in Græcorum gymnasiis nata consuetudo videtur, in quibus isti liberi & concessi sunt amores.* Cicero, Tusc. ul. quæst. l. 4. n. 33. Ennius had said before Cicero, *Flagitii principium est nudare inter cives corpora.* Apud Cicer. loco cit. See also Plut. t. 2. p. 274. 751.

spoke of it ¹. I shall only add, that the women never assisted at the public games. They were even forbid under grievous penalties to approach the place where they were celebrated ^m.

It remains, that I speak a word of the theatre of the Greeks, and of the taste which the Athenians particularly had for that diversion. We know, that theatrical representations took birth amongst the Greeks, and that to them alone the invention is due; we may fix the epocha of it to about the year 590 before Jesus Christ. These spectacles were in use only at certain times of the year, and particularly at the celebration of the feasts of Bacchus.

I shall not stop to examine the origin and various progress of the theatre amongst the Greeks. The reader may consult on this subject the authors who have made it the principal object of their researches. Some summary ideas will, I think, be sufficient for the end I have proposed.

It is to the Athenians, without contradiction, that the Greek theatre is indebted for that degree of perfection to which we see it was carried. They spared nothing that could any wise contribute to it. This people, voluptuous, but delicate in their pleasures, established a concourse of authors, and commissaries named by the state to judge of the merit of the pieces. None were allowed to be played till they had first undergone examination ⁿ. That which obtained the plurality of suffrages, was declared victorious, crowned as such, and represented at the expense of the republic with all possible pomp and magnificence. it is easy to perceive how much ardour and emulation these

¹ *Supra*, p. 227.

^m *Ælian*. var. hist. l. 10. c. 1.; *Paus.* l. 5. c. 6. We must however in this respect do justice to the Greeks. The law which forbade the women to assist at the public games, was very wise, and very conformable to public decency and modesty. Decorum demanded that the sex should not be admitted to most of these spectacles, where the actors always appeared entirely stripped of cloathing.

ⁿ See *Plut.* in *Cimone*, p. 483. E.

disputes and these public rewards must have excited amongst the poets, and how much such an usage must have contributed to the perfection of dramatic pieces in Greece.

We cannot in this respect but applaud the Athenians for the taste and sensibility they testified for theatrical representations; a diversion the most ingenious, the most noble, and the most useful, perhaps, that can be procured for the multitude. But we must at the same time condemn the excess into which this people fell in the end. The Athenians very soon carried their eagerness and their passion for the theatre to such a point, as to make it their sole occupation, and even to sacrifice to it the interests of the state. The funds destined for their armaments by sea and land, were employed and consumed in the service of the drama. "They are more assiduous at the spectacles," says Justin, "than at military exercises. The theatres are full, but the camps deserted. Bravery, capacity, and the art of war, are reckoned for nothing. Great captains are no longer applauded. There are no acclamations but for good poets and excellent comedians."

These reproaches are not exaggerated. It is certain, by the unanimous testimony of antiquity, that, in the time of Pericles, the Athenians gave up all business, and neglected all affairs, to employ themselves entirely with the theatre. We see also, that to embellish it, and have the pieces that pleased them played with all the apparatus and all the magnificence they could admit, they drained the treasure and resources of the state ^p. If Solon had been believed, this taste for dramatic pieces had soon fallen, or at least would not have caused so many disorders. Thespis, who is commonly looked upon as the inventor of the theatre, by reason of the improvements he made in the first essays that Greece had seen of this spectacle, flourished in the time of Solon. This great legislator would judge of that novelty

* L. 6. c. 9.

^p Demosthen. Philipp. 1. p. 52. C.; Olynth. 2. p. 24.; Plut. t. 2. p. 342. 349. 710. 711.

by himself. Thespis played his own pieces, as was the custom of the ancient poets. When the representation was finished, Solon called Thespis, and asked him, if he were not ashamed to lie thus before so many persons. Thespis answered, that there was no harm in these lies and these fictions, which were only made in sport, and for diversion. "Yes," replied Solon, striking the ground strongly with his stick, "but if we suffer and approve this fine sport, it will soon make way into our contracts and all our affairs."

We must allow, nevertheless, that the Greek tragedians always preserved great respect for virtue, justice, purity of manners, and public decency. Their poems abound in admirable maxims; but we cannot too much exclaim against the licence which reigned in the Greek comedy. I have spoke elsewhere of the gross obscenities so abundant in the comedies of Aristophanes^r. I have nothing more to say of them. I shall only remark, that, besides their indecency and grossness, the most merciless satire, the roughest and most biting, reigns through them all. The comic poets of those times took all liberties and spared no body. The generals, the magistrates, the government, the people, even the gods themselves*, all was abandoned to their satiric bile. The excess was carried so far, that they were not at the pains to disguise even the names of the personages they would defame. Every one was introduced upon the stage under his true name^r. This was not all: for fear that a resemblance of names might cause mistakes, and leave some uncertainty in the minds of the spectators, they gave the actors masks which represented, as far as was possible, the visage and physiognomy of those they wanted

^a Plat. in Solon. p. 95.

^r *Supra*, p. 228

* We must however, in this respect, remark, one singular exception. Aristophanes, the most licentious, without contradiction, of all the comic poets of the ancient theatre, never durst allow himself any liberties against Ceres, nor in general against any thing which might relate to the worship of that goddess.

^r See Aristophan. in nubib. in equitib. &c.

to expose to the derision of the public †. Such, for a long time, was the Grecian comedy; that is to say, it was a spectacle equally licentious and satirical, without decency or modesty, without respect of persons, without regard to morals, for which nothing was sacred, and where they might openly defame all whom they thought fit to render the object of public contempt. The magistrates were at length obliged to repress that pernicious abuse, and to restrain, by severe prohibitions, the unbridled licence of the comic authors[‡]. These wise regulations gave birth to what the ancients have called the *new comedy*, which then became only an imitation, and a fine and delicate satire on the manners of private life. They no longer brought upon the stage any but feigned adventures and supposed names. As this advantageous change was brought about in ages greatly posterior to those whose manners I have undertaken to paint, I shall dwell no longer upon this subject[§].

† See les mem. de l'acad. des inscript. t. 4. p. 134. &c.

‡ See Cicer. philosophic. frag. t. 3. p. 393.

§ Horat. ars poet. v. 281. &c.

R E C A P I T U L A T I O N.

BY bringing together all I have said of the state of ancient nations, in the ages which elapsed from the deluge to the time of Cyrus, it is easy to perceive how greatly human knowledge was formerly bounded and imperfect. Politics, laws, arts, sciences, commerce, navigation, the art-military, even the manners, that is to say, the principles and turn of mind the most essential and most necessary for the preservation and happiness of society; all these great objects were, if we may so express it, but as yet in the rough draught in the time of Cyrus, and yet the reign of this prince preceded the Christian æra only 536 years. A slight detail will convince us of the truth of all these propositions.

During all the space of time that we have run over, they had but very imperfect notions of the great art of government. The most part of political and civil laws were obscure and defective, often even pernicious or ridiculous, in a word, without form or order. The rights of nations were unknown, and morality in general little understood; it even often authorised principles which led directly to the greatest vices. As to that political system which now takes in and regards the whole universe, we may affirm, that the ancients had no idea of it. There was then no power who thought of keeping up a regular correspondence in the different parts of the known world. The leagues even which neighbouring states might have amongst themselves, were but momentary. The present instant was all that was regarded. The consequences of any step or event were rarely foreseen and examined into. They formed no political system. Every state stood single, and gave little attention to the general motions of the machine. Accordingly they were not accustomed to keep ambassadors resident in foreign courts. The ancients were
not

not enough enlightened to perceive the utility of this sort of privileged spies *, who, attentive to the minutest steps, are able to penetrate and lay open the projects which may be formed by a too enterprising power. Thus the famous system of the balance of power, the object of modern politics, far from having been followed anciently in any part of the universe, does not even appear to have ever entered the head of any politician of antiquity.

What I have just said of laws and politics, may very well be applied to the arts. The nations I have had occasion to speak of, had, in certain respects, made but a very middling progress in the general circle of them. They had indeed some rich and curious manufactures of stuffs. They understood the working of metals. They had raised some structures of astonishing grandeur and richness; in a word, they handled the chisel, the punch, and the graver. Yet these same people were destitute of most of the conveniences of life, which are now regarded, and justly too, as very essential, or, at least, as most agreeable. The ancients were absolutely ignorant of the secret of procuring them. I have given sufficient proofs of this, as often as I have had occasion to treat upon the subject.

We must say the same thing of the sciences. We cannot refuse to the Egyptians, Babylonians, Phœnicians, and Greeks, a pretty extensive knowledge in astronomy, geometry, and mechanics. Yet they were never able to soar beyond a certain pitch, for want of knowing how to procure themselves many helps, which are absolutely necessary to the progress of the sciences I speak of. They wanted, for instance, pendulums and telescopes, and, in a word, many other instruments, without which astronomy and geography can acquire absolutely no kind of precision. The ancients were destitute of even the most ordinary and indispensable means of ascertaining their discoveries. The reader may recall what I have said upon the tedious and awkward manner of writing in the early times, upon the in-

* It is thus that one of the greatest politicians of the last age defined ambassadors and envoys.

conveniencies of the form of books, and upon the difficulty of carrying, and, in general, of obtaining the reading of them*. It was anciently only by force of travelling that some knowledge could be acquired. As to physics and natural history, we know that they were almost entirely unknown to the ancients.

For commerce and navigation, it is certain that the Phœnicians particularly had made a considerable progress, and not a few discoveries, considering the obstacles they had to surmount. But if, at the same time, we reflect upon the faulty construction of their ships, the imperfection of their manner of working them, their absolute want of instruments proper to direct their navigation, and the clumsiness, in a word, of all their practices, we shall admire the courage of these people rather than their skill. We must applaud their courage for daring such enterprises with such poor helps, and at the same time be convinced of their inferiority in respect to the discoveries we are at present possessed of. It appears to me, that the ancients were very enterprising, but very little enlightened.

The art of war was to the full as imperfect as any of the objects I have just spoke of. We should never have done, if we were to point out in detail the imperfection of the military manœuvres of the ancients in the ages which have fixed our attention, and shew all that failed them in point of art, skill, and capacity. I think it sufficient to refer to what I have said on the subject in the different parts of my work.

I shall do the same with regard to the manners. The reader may have remarked in all the articles where I have had occasion to treat of this object, to what a degree the manners of the first people were unprincipled, barbarous, gross, and vitious. Their want of delicacy, and their ignorance of the first principles of morality, are perceptible where-ever we consult ancient history.

I do not therefore fear to assert, that in all the space of

* See part 1. book 2. chap. 6. p. 187. 188. ; book 3. chap. 2. art. 6.

time we have here gone over, human knowledge was yet most limited and most imperfect. Amongst most nations, laws, arts, and sciences were yet almost in their infancy. The Egyptians, the Babylonians, and the Phœnicians, who should certainly be placed in the rank of the most civilized nations that have appeared in antiquity, had made but a very middling progress in each of the objects I have indicated. As to the Greeks, who in course of time every way excelled the Egyptians, Babylonians, and even the Phœnicians ; the Greeks were yet very ignorant in the time of Cyrus, the epocha of the third and last part of our work. Near two ages elapsed between those which close our researches, and the times in which the Greeks made most of the discoveries which obtained them that glory and just esteem they yet at present enjoy, and of which nothing can ever rob them. No body has yet surpassed them in poetry, in eloquence, nor in the art of writing history. It is not quite the same thing with the demonstrative sciences, nor even with many parts of the arts. It must be allowed, that, if we except architecture *, sculpture, and the graving of precious stones, no comparison can be made between what the Greeks knew of the objects I have just indicated, and what we know of them at present.

* Let us observe nevertheless, in relation to architecture, that the Greeks had indeed a very just and refined taste for the construction of grand edifices ; but I do not think it was the same with respect to private buildings. I think I may affirm, that they knew not the art of disposing them so elegantly and so commodiously as is the practice with us at this time.

D I S S E R T A T I O N I.

On the valuation of the Greek money and measures.

I Have often had occasion, in the course of the work which I present to the public, to speak of antique money and measures. As it is to the Greeks that we are indebted for the greatest part of the knowledge that remains to us of profane antiquity, it is almost always to the Grecian standard that we are to reduce the money and measures of ancient nations. I have therefore thought it proper to give a valuation of those monies and of those measures, which should justify the proportion which I have established between them and ours. Besides, by consulting this kind of table, the reader will be enabled to make, with ease and by himself, the reductions which I may have omitted.

There is perhaps no subject which has more exercised the critics, than the determination of ancient monies and measures. Perhaps, however, there is none which is yet enveloped in greater obscurity. I am very far from flattering myself with having made this matter clear. I propose only to say what appears to me the most probable on a subject so uncertain, without pretending in any manner to give an absolute exclusion to the valuations which have already been imagined, and to which I have not thought myself obliged to conform.

C H A P. I.

Of the Grecian money.

THE value of coins, we know, depends upon their standard, and upon their weight. There is yet found at this day,

day, in the cabinets of antiquaries, many Greek coins in general, and in particular Attic coins. These last are those which are most frequently mentioned in ancient authors, and those to which they have commonly referred all the others. We shall follow their example, and shall take the Attic coins for standard pieces. Many of them have been assayed, and, by various reiterated experiments, a certainty has been obtained, that the gold and silver employed by the mint of Athens, were, to a very slight difference, of the same standard with the gold and silver employed in our coins. This fact is therefore very certain, and upon this article we have all the light we can desire.

But it is by no means so easy to determine what was the fixed and precise weight of these coins. Almost all those which remain to us at this day, have been more or less impaired by the use which has been made of them for so many ages, or through lapse of time. It is in some sort morally impossible to find two Attic drachmas, for example, which weigh precisely one as much as the other. It has been necessary therefore to have recourse to some other expedient to ascertain the weight of antique coins. Of all those which have been imagined, the most philosophical is without contradiction that which Gassendi made use of about the middle of the last century. The idea of it was suggested to him by the celebrated M. De Peiresc, whom nothing escaped that could any way contribute to the advancement of human knowledge, and who spared no expense for that purpose.

There is seen at Rome, in the palace of Farnese, an antique congius perfectly well kept. The congius, amongst the Romans, was a liquid measure containing ten Roman pounds of wine^a. That of which we speak, is by so much the more valuable, as it appears, by the inscription it bears, that this vessel was deposited in the capitol in the reign of Vespasian, to serve for a standard of that kind of measure. M. De Peiresc caused a model to be made of it, which he took care to verify exactly by the original. It is with this

^a *Congius vini decem pondo fiet.* Festus, voce *Publica pondera*, p. 402.

model, which did not arrive in France till after the death of M. De Peiresc, that Gassendi made the experiment I am about to speak of.

He filled this congius with well-water, which he weighed very scrupulously, and found, that it contained six pounds fifteen ounces six gros, Paris weight *. Gassendi, from that experiment, concluded, that the ancient Roman pound was the tenth part of this weight, that is to say, eleven ounces $28\frac{4}{5}$ grains, and that, of consequence, the Roman ounce, which was the twelfth part of it ^b, consisted of seven gros $32\frac{2}{5}$ grains ^c.

We know that the drachma, which was a silver coin, weighed the eighth part of a Roman ounce ^d. The proportion of the other Attic coins is also known; so that the determination of the ancient Roman pound carries along with it that of the weight of the Greek coins. But this determination, such as it has been made by Gassendi, appears to deserve admission only by so much as nothing more precise and more exact may be obtained upon the object here in question. It supposes in effect, that the weight of the well-water which this philosopher made use of to find the capacity of the Farnesian congius, is equal to that of wine; a supposition demonstrated false by experience, which shews us, that wine is always lighter than water, especially than well-water, which of all fresh waters is the heaviest. Let us add, that the model of the Farnesian congius which Gassendi made use of, may possibly have not been precisely of the same capacity as the original vessel.

These, without doubt, were the considerations which afterwards engaged M. Auzout, of the academy of sciences, in a journey which he made to Rome towards the end of the

* See the table at the end of this dissertation.

^b *Uncia*

in libra pars est quæ mensis in anno.

Fannius *in* carmine de ponderibus & mensuris.

^c Vid. Gassend. *in* vita Peireskii, l. 2. p. 73.

^d *Δραχμή η τὸ ὀγδὸν τῆς ὀνίας.* Hesych. *in* voce *Δραχμή.*

Drachma octo Latinam unciam faciunt. Hyeronim. *in* cap. 4. Ezek.

Uncia fit drachmis bis quatuor. Fannius, loco cit.

last century, to repeat the experiment of Gassendi upon the congius of the palace of Farnese itself. Instead of well-water which Gassendi made use of, M. Auzout employed spring-water extremely light. The original congius was found by this experiment to contain six pounds twelve ounces seven gros and 48 grains Paris weight, of water of the fountain of Trevi*. I think therefore, that we may conclude from this fact, that the ancient Roman pound was the tenth part of this weight, that is to say, ten ounces seven gros twelve grains, and the ounce precisely of seven gros nineteen grains. I own however, that the argument drawn from the difference of the specific gravity of wine and of water, militates almost as much against the experiment of M. Auzout, as against that of Gassendi. Reasoning therefore would seem to lead us to estimate the Roman ounce at about seven gros $\frac{299}{743}$ only*. Nevertheless here are in two words the reasons which determine me in favour of the opinion I have thought fit to embrace.

The same M. Auzout I have spoke of, satisfied himself, that the modern Roman pound was of ten ounces seven gros twelve grains, and the ounce of seven gros nineteen grains. It follows then, that the Roman pound and ounce of the present times are perfectly equal with the antique Roman pound and ounce, supposing, as we have said, that the Roman congius should contain precisely ten pounds weight of spring-water. This perfect relation between the ancient pound and the modern (a relation which cannot have been the effect of chance), seems to demonstrate, that the Roman pound has received no change for upwards of seventeen centuries, especially if there is room to suspect, that the ancient Romans knew not the difference of weight between wine and water, or that at least they had no regard to it, in fixing the standard of their measures; and of this

* See tom. 6. des anc. mem. de l'acad. des scienc. p.

* This determination is drawn from the proportion between the specific gravity of water and of Burgundian wine, which results from the calculations of M. Eifenschmid in his treatise *de ponder. et mensur. veter. Argentorati, in 12^o. 1708.*

there

there is the clearest proof in the poem of Fannius, which we have already cited more than once ^f.

The value of the ancient Roman ounce being once well determined, and of consequence the weight of the Attic drachma, which was the eighth part of it; we shall easily come at the weight of the other Greek coins, such as the talent, the mina, and the obolus. The drachma, in effect, contained six oboli, the mina 100 drachmas, and the talent 60 minæ ^g. The whole then may be reduced to a short calculation which gives the values thus ^{*}:

The Attic talent weighed, of	marks.	ounces.	gros.	grains.
Paris weight	-	-	85	0 7 66
The mina	-	-	1	3 2 57½
The drachma	-	-	0	0 0 65¾
The obolus	-	-	0	0 0 10¼¾

According to this calculation, supposing silver of fifty livres tournois the mark,

	livres.	sols.	deniers.
The Attic talent was worth	4256	3	8 ⅜
The mina	70	18	8 8⅞
The drachma	0	14	2 2⅞
The obolus	2	0	0 4⅞

To this very summary epitome, I have thought fit to limit what I had to say upon the valuation of the Greek monies, and upon the proportion they might bear to ours. Let us pass on to their measures.

^f *Libræ ut memorant bestum sextarius addit,
Seu puros pendas latices, seu dona Lyci.*

*Hæc tamen assensu facili sunt credita nobis,
Namque nec errantes undis labentibus amnes,
Nec mer si puteis latices, aut fonte perenni*

*Manantes par pondus habent: non denique vina,
Quæ campi, aut colles nuperve, aut ante tulere.*

^g *Τάλαντον . . . μινῶν ἔστιν ζ'. ἡ δὲ μινᾶ δραχμῶν ε'. ἡ δὲ δραχμὴ ὀβολῶν ἑξ.*

Suid. voce Τάλαντον, t. 3. p. 425. See also the beginning of the oration of Demosthenes against Pantænetus.

^{*} See the table at the end of this dissertation.

C H A P II.

Of the Grecian measures.

IT is at least as difficult to determine exactly the value of the Grecian measures, as that of their money. The stadium, for example, was amongst the Greeks an itinerary measure which is mentioned every instant in ancient authors. But they by no means agree upon the determination of that measure. In effect, we see, that the length of the stadium varied greatly according to times and places. There was no more uniformity amongst the ancients in regard to that measure, than there is now amongst us upon the length of our leagues, and in general upon that of all the itinerary measures which are actually in use in Europe. But as there is amongst us a medium league, to which it has been agreed to refer all measures of the same name; so amongst the Greeks there was a common mean stadium, to the determination of which I have thought proper to confine myself here.

The ordinary stadium, and that most universally adopted, consisted of six hundred Greek feet ^h. The plethra, another kind of measure, made the sixth part of the stadium ⁱ. The arura was the half of the plethra ^k. The orgia was six feet ^l; and, lastly, the cubit a foot and a half ^m. We know that the Greek foot was more than the Roman foot by the 24th part of this last ⁿ. The determination of the

^h Το σταδιον ἔχει ποδας χ'. Suid. in voce Σταδιον, t. 3. p. 367.

ⁱ Ἐχει τὸ πλῆθρον ποδας ς'. Suid. voce πλῆθρον.

^k ἡ ἀρῦρα ποδας ἔχει ν'. Id. voce Ἀρῦρα μάντις.

^l Δέκα μυριάδες . . . ὀργυίων . . . εἰς χίλιοι στάδιοι. Herod. l. 4. n. 41.

^m Πῆχυς . . . ὃ εἷς κ' ἡμισυ πᾶς. Hesych. voce Πῆχυς.

ⁿ Stadium centum viginti quinque nostros efficit passus, hoc est, pedes sexcentos viginti quinque. Plin. l. 2. sect. 21. p. 86.

Now the stadium, which, as we have just seen, was precisely 600 Greek feet, could not be 625 Roman feet, unless the Greek foot was to the Roman in the proportion of 25 to 24.

Grecian measures is of consequence as intimately connected with that of the Roman foot, as the estimate of the Attic coins is with that of the Roman pound.

Two ancient authors tell us, that the Roman amphora, a kind of liquid measure, since it contained eight congii, was precisely a Roman cubic foot*. The water which this measure contained, must have weighed, by the experiment of M. Auzout, 54 pounds 7 ounces 5 gros and 24 grains, Paris weight. Supposing, from the experiments of M. Eifenschmidt, that the weight of the spring-water which M. Auzout made use of was $371\frac{1}{2}$ grains to the cubic inch, (of the royal standard foot), the capacity of the amphora must have been such as, according to the Stereometrical rules, its side should be less than eleven inches $\frac{3}{4}$ of a line, but more than eleven inches $\frac{2}{3}$ of a line. The Roman foot must of consequence be estimated at about eleven inches $\frac{17}{14}$ lines. Yet I think with M. de la Hire, that we ought to reckon the antique Roman foot precisely eleven inches of the Royal standard measure. I refer the reader to the memoir which that academician gave in upon this subject, to see the grounds of this valuation^p. I shall content myself with observing only, that the Romans were never great mathematicians. I have proved above, that they reckoned nothing for the overplus of the weight of water more than of wine in the standard of their measures. They may therefore very well have neglected and reckoned for nothing the three fourths of a line, or thereabouts, by which the side of the cube, which served for the matrix of their amphora, surpassed their lineal foot. This conjecture will appear less difficult to be believed, when

* *Quadrantal vocabant antiqui amphoram, quod vas pedis quadrati octo et quadraginta cepit sextarios. Festus voce Quadrantal.*

Quadrantal vini octaginta pondo fiet, congius vini decem, pondo fiet. Idem voce Pulica pondera.

Pes longo spatio, atque alto, latoque notetur;

Angulus ut par sit, quem claudit linea triplex.

Quatuor, et quadris, medium cingatur inane,

Amphora fit cubus. . . . Fann. carm. cit.

^p Acad. des scienc. ann. 1714, m. p. 397.

it is considered, that about the end of the last century M. Picard discovered that the standard of the Parisian pint which was then made use of, wanted more than 1224 cubic lines of the capacity to which the ordinances had fixed that kind of measure ^a.

Let us resume all that has been just said, and form this calculation from the principles we have laid down: since the Roman antique foot was eleven inches, the Greek foot was eleven inches five lines and a half: thus,

	fathoms.	feet.	inches.	lines.
The stadium was	95	2	11	
The plethra	15	5	5	10
The arura	7	5	8	11
The orgia		5	8	9
The cubit		1	5	2 $\frac{1}{2}$

It results from this calculation, that 24 ordinary stadia were only nine fathoms one foot seven inches 2 $\frac{2}{7}$ lines more than our common league of 2282 $\frac{2}{7}$ fathoms. I shall say nothing of the other stadia, as such a discussion could be of little use to the work I have undertaken.

This were the place to speak of the dry and liquid measures; and of the weights which the Greeks made use of in commerce. But we are almost entirely destitute of points of comparison to fix the value of these weights, and of these measures. I shall therefore say but little upon this subject.

Fannius, whom I have already cited so often, tells us that the Attic pound was to the Roman as 75 to 96, or as 25 to 32^r. We see also, in the same poet, that the amphora or Attic cadus, which was a liquid measure, was equal to three Roman urns, or to a Roman amphora and a half^r.
Lastly,

^a See the treatise of M. Picard, *de mensur.*

^r *Uncia fit drachmis bis quatuor.*

Unciaque in libra pars est quæ mensis in anno.

Hæc magna Latio libra est, gentique togatæ:

Attica nam minor est. Ter quinque hanc denique drachmis,

Et ter vicenis tradunt explerier unam.

^s *Amphora fit cubus.*

Lastly, we read in the life of Atticus by Corn. Nepos, that the Attic medimnus, which was a dry measure, was equal to six Roman bushels^t. We know, by the testimony of Fannius, that the bushel amongst the Romans was the third of their amphora or cubic foot^u.

Reducing these weights and measures to ours, by means of the valuations of the pound and of the foot of the ancient Romans which I have given above, we shall find,

1. That the Attic pound weighed 8 ounces 4 gros 7 grains and $\frac{1}{7}$ Paris weight.

2. That the Attic cadus contained one foot $268\frac{1}{2}$ cubic inches, or 41 pints one chopin $2\frac{1}{2}$ cubic inches, Paris measure.

3. Lastly, that the Attic medimnus contained one foot 934 cubic inches, or four bushels one litron and a half, and $9\frac{1}{4}$ cubic inches, Paris measure^{*}.

This feeble essay is all we can pretend to, from all that is to be found most certain upon the subject we had undertaken to examine. The few monuments that remain of antiquity, and above all the unexactness of ancient authors in what they say of the coins and measures in use in their times, give us little room to hope for greater certainty.

Hujus dimidium fert urna.

Attica præterea dicenda est amphora nobis

Seu cadus. Hanc facies, nostræ si adjeceris urnam.

^t *Universos frumento donavit, ita ut singulis sex modii tritici darentur; qui modus mensuræ medimnus Athenis appellatur. cap. 2.*

^u *Amphora ter capit modium.*

^{*} We suppose here the bushel to be 648 cubic inches, that is to say, that it is considered as the 144th part of the muid of 54 cubic feet. The litron and half-litron are also supposed to be precisely the sixteenth and thirty-second part of the bushel of 648 cubic inches. I say supposed, because these calculations are not perfectly conformable to the result given by the dimensions of the cylindrical standards of the measures I speak of; dimensions relative to the capacity assigned to these measures by the regulations.

DISSERTATION II.

On the astronomical periods of the Chaldeans.

WE are not ignorant of the use and advantage of astronomical periods in the supputation of time. We know also that the ancients had contrived many of them composed of a certain number of their years. These periods were different according to the use they were designed for, and to the form of the year established amongst the nations who had contrived them. The names of three famous periods invented by the Chaldeans are handed down to us: the *Saros*, the *Neros*, and the *Sosos*^a. Berofus made use of them in composing his chronological calculations, and fixing the epochas of his history of Babylon^b. It was by these measures of time, that he had regulated and determined the duration of that empire, and the length of the reigns of the different sovereigns who had governed it.

The amount of the *Saros*, of the *Neros*, and of the *Sosos*, were certainly well known and well determined in the times that Berofus composed his history. But the ancient monuments of the Babylonians are now no more. It is even many ages since they disappeared. It is not therefore astonishing that there should reign many contradictions amongst modern authors, as well upon the number of years that composed these famous periods, as upon the uses they may have been adapted for. Let us try however, by bringing together the different traits which are found scattered in ancient authors, to give some light into a question so obscure and so difficult.

It is certain by the testimony of all antiquity, that the

^a Syncell. p. 17.; Abyden. *apud* eumd. p. 38. C.

^b Syncell. p. 17. A.

Saros, the *Neros*, and the *Sofos*, were cycles which contained a certain number of years^c. We ought not to listen to some writers recent enough, who without any foundation would insinuate, that the periods I speak of should be reduced to periods of days only. It is a chimera which deserves no attention. We shall refute it in a moment. Without deigning therefore to dwell any longer upon it, let us examine what may have been the real amount of these cycles, and what their use in astronomy. Let us begin with the *Saros*, which, of all the periods of the Chaldeans, appears to have been the most celebrated in antiquity. Many authors have spoke of it^d: but they do not agree upon the number of years of which that period was formed. Let us see whether it be possible to determine it at this day, and discover by that means what may have been the use of this cycle.

Syncellus tells us, after Berofus, Abydenus, Alexander Polyhistor, &c. that the *Saros* was a period of 3600 years^e. We know of no astronomical operation to which a period of that kind can be applied. Suidas, an author cotemporary with Syncellus, or at least but little before him, gives to the *Saros* a very different amount. That author says, that it was a period composed of lunar months, the sum total of which was eighteen years and an half^f. Suidas cites no ancient author to warrant this fact, and does not tell us from what authority he gives the *Saros* an amount so different from that we have just seen. Though we should agree with Suidas that the *Saros* might have been composed of 222 lunar months, yet we do not see what might have been the use of such a period.

We might suspect, it is true, that there is an error in the text of Suidas, and that, instead of 222 lunar months, we should read 223. We might even bring a passage of Pliny to support this conjecture. Pliny was indeed acquainted with a period of 223 lunar months^g. In all the editions

^c Berof. Abyden. & Syncell. *locis cit.*

^d Berof. Abyden. Syncell. *locis cit.*; Suidas in Σάρος, t. 3. p. 289.; Hesychius in Σάρος.; Phavorin. &c.

^e P. 17. 28. & 39.

^f In Σάρος, t. 3. p. 289.

^g L. 2. sect. 10. p. 79. anterior

anterior to that of P. Hardouin there had crept in a vitious reading, which, no doubt, had prevented a due attention to the amount and merit of that period. The former reading of the text of Pliny was 223 months. M. Halley, who was not less distinguished for his profound erudition, than by being one of the greatest astronomers of his age, was the first who perceived that false reading of the editions of Pliny. He proposed the amendment of this vitious passage, and to read 224 months instead of 222^b. What was only conjecture on the part of this learned man, has been found, by the researches and discoveries since made, to be the true reading of Plinyⁱ. It is therefore now no longer doubtful, that Pliny was acquainted with a period composed of 223 synodic lunar months. M. Halley wanted, with Suidas, to identify this period with the *Saros* of the Chaldeans; and this is the conclusion he draws from it.

From demonstrating that the amount of the *Saros* must have been fixed at 223 lunar synodic months, that is to say, of 29 days and an half each, it results, says M. Halley, that this cycle contained near 18 of our years; a calculation, adds he, which agrees pretty well with the amount that Suidas gives the *Saros*^k. This discovery, continues M. Halley, places in its full light the skill of the astronomers of Chaldea. In effect, that period furnishes a very easy method of predicting eclipses within the limits of the error of half an hour only^l. Diodorus was, therefore, ill informed when he advanced that the Chaldeans had only a very imperfect theory of the eclipses of the moon, and that they durst neither determine nor foretel them^m.

Such is the reasoning of M. Halley; but I think his conjectures much more ingenious than solid. The testimony of Suidas being supported by the suffrage of no author of antiquity, cannot balance that of Berossus, nor of the other writers who give 3600 years to the *Saros*. Besides, Suidas af-

^b Transf. Philos. n°. 194. ann. 1692. p. 535. ; Acta erudit. Lips. ann. 1692, p. 529.

ⁱ See the note of P. Hardouin, *loco cit.*

^k Supra, *loco cit.*

^l See the elogium of M. Halley, Acad. des sciences, ann. 1742, H. pag.

^m L. 2. p. 145.

signs, not eighteen years, but eighteen and an half to the total revolution of the *Saros*; and we know, that in astronomy much less than six months will confound the whole result of a period. In fine, Suidas gives the *Saros* only 222 lunar months, and not 223. In vain would we correct this text by that of Pliny. Nothing can lead us to surmise, that this last had in view the *Saros* of the Chaldeans. I am persuaded, that this period was indeed composed of a certain number of lunar months; the name alone indicates it*: but I do not see that it is possible at this time to determine precisely what was the number†. We must therefore give up the search of the *Saros*, since we can never hope to know what was the amount, nor, of consequence, what the use of it. Let us go on to the examination of the other Chaldean periods, that is to say, of the *Neros* and of the *Sofos*.

The revolution of the *Neros* was of 600 years^a. Independent of the authors I have already cited, Josephus the historian appears to have been acquainted with this period. Speaking of the long life of the first patriarchs, he thus expresses himself. “Amongst other views which God had “had,” says he, “in granting to the first patriarchs a “life so long as that attested by the sacred books, he designed to enable them to perfect geometry and astronomy which they had invented; for,” adds he, “they could “not have foretold with certainty *the motions of the stars*, “if they had lived less than 600 years, because, in that “space of time, is accomplished the *great year*.”

Josephus,

* The name of *Saros*, given to this period, would alone suffice to prove that it was composed of lunar months. The word *Saros* answers exactly to the Chaldean word *Sar*, which signifies *menstruus* or *lunaris*.

† Though we should even grant with M. Halley, that we ought to read in Suidas 223 lunar months, his reasoning would not be the more just. M. le Gentil has, in effect, demonstrated the total and absolute imperfection of that period so vaunted by M. Halley. Acad. des sciences, ann. 1756, M. p.

^a Syncell. p. 17.; Abyden. apud eumd. p. 38. C.

* These are the terms in which Josephus expresses himself: “Ἀπὲρ οὐκ ἀσφαλῶς αὐτοῖς προεῖπεν μὴ ζήσασιν ἑξακοσίαις ἐνιαυτοῦς· διὰ τούτων γὰρ ἀμύγας ἐνιαυτοῦς πληθεύται. Antiq. l. 3. c. 3. p. 17. “Which things (that is to say, geometry and astronomy) they (the patriarchs) could not have predicted.”

Josephus, as we see, was therefore acquainted with the *great year*, that is to say, with an astronomical period, which, he says, was composed of 600 years. Every thing leads us to believe, that it was of the *Neros* of the Chaldeans that Josephus meant to speak. For I see no other people in antiquity amongst whom such a period was in use. Before we apply ourselves to develop the propriety of this cycle of 600 years, it is proper to examine that of the *Sosos*, because the *Neros* owes its origin to the *Sosos*, as I flatter myself with demonstrating.

The ancients tell us, that the *Sosos* was composed of 60 years^p. That period, the first, without contradiction, of which the Chaldeans made use, was very imperfect; since, after its revolution, it brought back the lunar months only to within a tenth part of a month. They must therefore have endeavoured to rectify and perfect it. It was not difficult to find the means. By doubling the *Sosos*, that is, by giving to this period 120 years, instead of 60, they had the return of the lunar months to within the twentieth part of a month. By multiplying this cycle as many times as is necessary to obtain the precise returns of the sun and moon to the same points of the heavens, is formed a period of 600 years, that is to say, the *Neros*. This last cycle is, in effect, nothing but the product of the *Sosos*, or the period of 60 years multiplied by 10. Thus, we see, there did not need much reflection upon the amount and propriety of the *Sosos* to deduce from it the *Neros* *.

The illustrious Jean-Dominic Cassini is, I think, the first

“ted with certainty, if they had lived less than 600 years; for the *great year* “is accomplished in that space of time.” It is easy to perceive, that Josephus does not express himself clearly in this passage; for though we see very well that the verb *προειπέν*, to *foretel*, relates to astronomy, which is spoke of in the preceding phrase, as geometry also is concerned, that manner of expression presents an ambiguous and defective sense; and it is to make the meaning of Josephus be understood, that I have added *the motions of the stars*, of which we should suppose he designed to speak.

^p Syncell. p. 17.; Abyden. apud eumd. p 38. C.

* All these facts are better cleared up, and exactly demonstrated in a memoir of M. le Gentil. See Acad. des sciences, ann. 1756, M. p.

who

who perceived the merit of the *Neros*. It is, in the judgment of that great astronomer, one of the finest periods that has ever been invented. It results from it, that the solar years of the Chaldeans were each of 365 days 5 hours 51' and 36" ⁹. That period also discovers to us, that the astronomers of Chaldea had determined to within a second the duration of the lunar month as exactly as the modern astronomers have been able to do it ^r. In effect, 600 years of 365 days 5 hours 51' and 36" make 7421 lunar months, consisting of 29 days 12 hours 44' 3", all but 7 thirds and 18 fourths. We ought therefore to regard the 219146 days, or, what comes to the same thing, the 7200 solar months, which form the period I speak of, as precisely equivalent to 7421 lunar months. Now, it is to that space of time that we may fix the epocha of the return of the sun and moon to the same points of the heavens; in a word, the *Neros* of the Chaldeans was in relation to the solar and lunar months exactly what the Victorian period is in relation to the *golden number* and *solar cycle* ^t.

It is not possible to determine precisely the age in which the Chaldean astronomers invented and made use of the *Neros*. I shall content myself with only remarking, that this cycle must have been known and received in Chaldea some time before Berofus. That historian, as I have just said, made use

⁹ Anciens mem. de l'acad. des scienc. t. 8. p. 5.

^r Id. ibid.

^t Anc. mem. de l'acad. des sc. t. 8. p. 5. I am obliged to inform the reader, that it is not to the *Neros* of the Chaldeans that M. Cassini applies his calculations and the reflections he has just read; it is to the *great year* spoke of by Josephus. But as this period appears to me to be the same with the *Neros* of the Chaldeans, and to have an evident relation to it, I thought I might apply the researches of that great astronomer to that period, of which I have already said the invention seems due to the Chaldeans, since we find none like it amongst any other people. M. Cassini, to say it by the by, would even have this period of 600 years to have been in use in the earliest ages. But Josephus says it not; and if he had said it, we should always have had a right to object to his opinion, as being contrary to all appearance of truth. In effect, such an invention supposes an abundance of knowledge which most certainly was not possessed by the earliest ages. What we have said in the first and in the second parts of this work, upon the imperfection of astronomy in those times, does not, I think, leave the slightest doubt upon the epocha of that period, which probably was not invented till in the latter ages of the Babylonian monarchy.

of it to form his chronological calculations, and we know that Berofus wrote in the third age before J. C. ¹. I should therefore think, that this period may have been invented towards the end of the empire of Babylon. This is, moreover, the most ancient date that can be assigned it ². We have seen elsewhere how imperfect astronomy was in Chaldea till the reign of Nabonassar ³.

It now remains, that I say a word of the opinion of those writers who have disputed the amount that I have thought right to assign to the *Saros*, the *Sofos*, and the *Neros*. They have pretended, that all these different cycles were periods formed of a certain number of days rather than of years. Two Greek monks, one named Annianus, and the other Panodorus, are, I think, the first who wanted to give authority to this system ⁴. They, both of them, wrote about the year 411 of the Christian æra ⁵. But one simple reflection will convince us, that their ideas, in this respect, should have no manner of weight.

In effect, what comparison can be made between Berofus, who says formally, that the *Saros*, the *Neros*, and the *Sofos* were periods of years, and two unknown Greek monks, who, about 700 years after the age in which that author wrote, would give us to understand the contrary, and insinuate, that all these different cycles were composed only of a certain number of days. Berofus, a cotemporary with Alexander, was born and passed his life in Chaldea. At hand to draw his knowledge from the original sources which were still subsisting in his time, he was enabled more than any body to know the amount of the periods he employed. In a word, it was from the ancient monuments of his nation that he composed the history of it; a histo-

¹ Tatian. advers. Græc. orat. p. 273.; Syncell. p. 15. D.

² See Syncell. p. 207. Nabonassar reigned about the year 747 before J. C.

³ See part I. b. 3. c. 2. art. 2. p. 228. & 229. See also part 3. b. 3. c. 2. art. I. p. 98! & 99.

⁴ Apud Syncell. p. 34. & 35. See also Scaliger, not. in Gr. Euseb. chron. p. 416. col. B.

⁵ See the notes of P. Goar ad Syncell. p. 33. col. E.

ry which Pliny, Josephus, Clemens Alexandrinus, Eusebius, Syncellus, and many others, cite frequently in their writings. Besides, Berofus is not the only writer of antiquity who has said, that the periods of which I speak, were periods of years. Eusebius, who was so well versed in the history of ancient nations, has acknowledged it ^a. Josephus, as we have already seen, testifies the same fact. We may add to all these testimonies, that of Suidas. He agrees with all the writers that I have here cited, in saying that these periods were formed of a certain number of years ^b.

The two Greek monks here in question had not the authority of any monument of antiquity for metamorphosing the periods I speak of into cycles of days. It was, on their part, only pure conjecture. Here is, as I imagine, what might have led them to propose such a notion.

Berofus, in composing his history, had not forgot that he was a Babylonian. We know, that many nations had then the madness of wanting to be regarded each as the most ancient that was known in the universe. Antiquity of date, in the ages I speak of, was regarded as the most glorious distinction that a people could value themselves upon. We cannot conceive, to say it by the by, how much that foolish ambition has been injurious to historical truth, and what confusion it has caused in the chronology of ancient nations. The Babylonians were of the number of those who would pique themselves upon the highest antiquity. According to them, they had subsisted as a nation 470,000 years ^c. Berofus, in his history, was intent upon maintaining and making good that ridiculous pretension. To give some colour to the enormous calculations he presented, and render them probable, he pretended to ground them upon the astronomical periods here in question. He invented, of consequence, a series of fabulous kings, whose reigns

^a See Syncell. p. 17. 34 & 35. ^b In Σάροι, t. 3. p. 289.

^c Diod. l. 2. p. 145. I shall shew the little foundation for that ridiculous pretension, in the following dissertation.

filled up the prodigious length of ages which he assigned to the Babylonian empire *.

The Greek monks I have mentioned, were shocked, and with reason, at the monstrous calculations which Berofus presented in his history. Their intention therefore was, to reduce the annals of Babylon to some sort of probability, by converting the periods on which Berofus supported his calculations, into simple periods of days. By this means they thought they could make all agree. They even blamed Eusebius for not having used some such method^d. But if these good monks had reflected but a moment on the motive which animated Berofus when he wrote, and upon the end which that impostor proposed, they would easily have discovered, that though his calculations were absurd and monstrous, there was, however, nothing to alter in the amount of the measures of time which he had employed. A proof, that these Chaldean periods were really composed of years and not days, is, that Berofus made use of them. For he would have counteracted his own intention, by discovering the chimera of the Babylonians upon their antiquity, if the *Saros*, the *Neros*, and the *Sosos* had been no more than cycles of days.

* I shall treat of this matter more at length, in the following dissertation.

^d *Apud* Syncell. p. 34. & 35.

DISSERTATION III.

On the antiquities of the Babylonians, Egyptians, and Chinese.

IT was the madness of most ancient nations, as has been shewn in the preceding dissertation, to pretend to trace their origin to infinity. The Babylonians, the Egyptians, and the Scythians, were those who particularly piqued themselves upon their high antiquity. By their accounts, they had existed as nations for thousands of ages. The Babylonians boasted that they had observed the course of the stars 473,000 years ^a, and the Egyptians 100,000 ^b. As for the Scythians, they pretended to be more ancient than the Egyptians ^c. In this class we may also place the Phrygians ^d and the Phœnicians ^e. In a word, each people laboured to heap ages upon ages, and display the antiquity of their origin. But when we come to search into the foundations of those pretended antiquities, we are greatly astonished to find, that they rest upon nothing certain, nor even probable. This is not all; we find that all these enormous calculations are of modern enough invention.

In effect, it does not appear, that, till the times of the conquests of Alexander, the annals of the Babylonians, or even those of the Egyptians, were traced very high. This is a fact which it is easy to prove by the testimony of Herodotus, of Ctesias, of Xenophon, of Plato, of Aristotle, and, in a word, of all the authors who wrote before the conquests of Alexander.

The Babylonians are often mentioned in Herodotus: he had even travelled amongst these people. Yet we find in his writings no traces of that prodigious antiquity which

^a Diod. l. 2. p. 145.

^c Just. l. 2. c. 1. p. 56.

^e Syncell. p. 17. D.

^b Augustin. de civit. Dei, l. 18. c. 40.

^d See Herod. l. 3. n. 2.

the Babylonians are said to have boasted of by much more recent writers. On the contrary, he gives only 520 years of duration to the Assyrian empire, which we know to have been formerly confounded with that of Babylon; and there is no appearance, that Herodotus should have spoke otherwise in his particular history of Assyria. For we see, that no writer has ever rested upon that work to raise higher the origin of the Assyrian monarchy.

Ctesias wrote a little time after Herodotus. We know that he had made a long abode in Persia. That author, who, of all those of antiquity, has assigned the longest duration to the Assyrian empire, does not however make it amount to more than 1400 years^f.

Xenophon, who has had occasion so many times to speak of the Assyrians and Babylonians, says nothing which can lead us to think, that, in his time, the origin of these people was regarded as so prodigiously ancient. We may draw the same inference from the writings of Plato, and from those of Aristotle. Both these philosophers speak often of the Assyrians and Babylonians; but no mention is made in their writings of those thousands of ages, whose existence and reality I am here examining. As for Aristotle, we see, that, in general, he was even a good deal inclined to treat as so many fables, all that was reported of the history of Assyria and of Babylon^g. In a word, I repeat it, we find no trace of these chimerical antiquities in the authors who preceded the conquests of Alexander.

I think I should say nearly as much of the Egyptian antiquities. Some authors, as has been just said, spoke of a duration of 100,000 years. Plato, however, tells us, that, in the time of Solon, those of the Egyptian priests who pretended to be the best instructed in the antiquities of their nation, did not carry back its origin to more than about 9000 years^h. Herodotus travelled in Egypt about 100 years after Solon. That space of time had been suffi-

^f Diod. l. 2. p. 142.

^g De rep. l. 5. c. 10. p. 404. E.

^h In Tim. p. 1044.

cient to give room for vanity and error to make some progress. He, in effect, relates, that, in his time, the priests of Thebes gave to the duration of their monarchy 11,340 yearsⁱ. These two calculations, such as Plato and Herodotus present them, are certainly of too hard digestion. There is some error, and we shall explain the cause of it in a moment. Nevertheless, what comparison can be made between this duration, and that which, according to some posterior writers, the Egyptians boasted of? It is then proved, by the testimony of the highest and soundest antiquity, that it was only in modern times that the Babylonians and Egyptians began to make a parade of those thousands of ages which I have spoke of above. It is now the business, to indicate the source, and mark the epocha of these ridiculous pretensions.

Berosus on one side, and Manetho on another, are incontestably the authors, and, if the expression may be allowed, the manufacturers of all these marvellous antiquities. It is, in effect, only since the publication of their works, that we begin to find, in ancient authors, traces of that excessive duration attributed to the monarchy of the Babylonians, and to that of the Egyptians. Berosus, a Chaldean priest, wrote about the year 280 before J. C. a little before the reign of Antiochus Soter^k. Manetho, an Egyptian priest, was cotemporary with Berosus, since he dedicated his history to Ptolemy Philadelphus^l, who mounted the throne of Egypt the year 284 before the Christian æra. It is probable enough, nevertheless, that the work of Manetho did not appear till after that of Berosus. I should even be greatly inclined to believe, with Syncellus, that Manetho thought of stretching out the duration of the Egyptian empire, only in imitation of Berosus, and not to make his nation appear too modern, in comparison of the Babylonians^m. Let us observe also, that Berosus and Manetho wrote in Greek; a circumstance not to be neglected

ⁱ L. 2. n. 142.

^l Syncell. p. 16.

^k Tatian. advers. Græc. orat. p. 273.

^m See *ibid.*

In the question we are upon, as will be shown immediately, It remains, to unfold the motives which may have determined these two writers to work up that monstrous chronology, which resulted from their annals, or rather from the simple catalogue of the kings which they said to have occupied the throne of Egypt and Babylon; for, as I shall demonstrate by and by, Berofus and Manetho produced no other authority to support their chimeras, than a simple list of kings.

I think, without hesitation, that I may attribute to mistaken vanity that incredible antiquity from which Manetho and Berofus would trace the origin of their nation. In the times that these two writers composed their annals, the Egyptians and Babylonians were alike subjected to the dominion of the Greeks. Berofus and Manetho sought probably to make themselves amends, by the pre-eminence of origin, and by the merit of antiquity, for the real advantage which the Greeks had then over the people of Asia and Egypt. For, as I have already remarked more than once, they were in those days extremely jealous of antiquity of date. Each wanting to give themselves the preference, it was who should date from the greatest distance. Berofus and Manetho, by chusing the Greek rather than their maternal tongue, wanted to enable the Babylonians and Egyptians to reproach their conquerors with the novelty of their origin, by opposing thousands of ages, to the small historical bounds of these inhabitants of Europeⁿ.

But it must be allowed, that the stratagem they made use of was very gross, and capable of imposing only on a people so ignorant of antiquity as were the Greeks. Here is the method Berofus took to ascribe to his nation a duration of 473,000 years. The astronomers of Chaldea had imagined certain cycles to determine the periodical return of the stars to the same points of the heavens. These cycles, as has been shewn in the preceding dissertation,

⁷ See Syncell. p. 16.

took in many ages. What did Berofus? To establish the antiquity which he would give to his nation, instead of saying, that a king had reigned so many years, he said, that he had reigned so many *saros*. It is thus that he made the duration of the ten first Babylonian kings amount to 436,000 years *. Such calculations sufficiently expose themselves. Pagan authors themselves were struck with their want of probability. Diodorus Siculus speaks of it in these terms: "We shall not easily give credit," says he, "to what the Chaldeans advance upon the antiquity of the first astronomical observations; for they say, that they began 473,000 years before the expedition of Alexander into Asia." Let us add to the testimony of Diodorus, that of Epigenes, whom Pliny affirms to have been an author of great weight *. This Epigenes, who probably wrote under Augustus, affirmed, that the astronomical observations of the Chaldeans did not go higher than 720 years †. We see then, that the good judges of even profane antiquity had critical knowledge enough to be sensible of the imposture of Berofus.

That author, however, had endeavoured to support his calculations in the best manner he could. In order to give them more credit, he boasted to have found, at Babylon, records of 150,000 years old ‡. Yet, for all this fine discovery, Berofus was not able to fill up with facts, and a detail of events, the space which he pretended had elapsed from the foundation of the Babylonian monarchy, to the time of Nabonassar, who mounted the throne only in the year 747 before J. C. This was enough to render more than suspicious all that Berofus would raise beyond that epocha. Imposture has its resources, and does not commonly want evasions. To extricate himself from this plunge, and to justify the immense void that the history of Babylon presented, Berofus advanced, that Nabonassar, infatuated with foolish pride, had suppressed all the historical monuments of his

* Syncell. p. 17. 18. & 39.

† L. 2. p. 145.

* *Epigenes gravis auctor imprimis*, l. 7. sect 57. p. 413.

‡ *Apud Plin. loco cit.*

† Syncell. p. 14. & 28.

nation, with intention to pass upon posterity for the first sovereign of Babylon^s. It is thus that Berofus thought to justify the chafms and want of facts with which he might well have been reproached.

Impostors are subject to betray themselves. On one hand, Berofus excuses the void which is found in his history, by laying it upon Nabonassar's having destroyed all the monuments of the kings his predecessors; and on another, he affirms, that he had found, at Babylon, records which ran back 150,000 years. One of these relations is certainly false and forged. Let us rather say, that the suppression of all the historical monuments of the Babylonians by Nabonassar, is a tale invented by Berofus, to colour over the impossibility he found of filling up, in a satisfactory manner, the times anterior to the reign of that prince. But it is dwelling too long upon a chimera, unknown, as I have already said, to the highest and soundest part of antiquity. It appears proved, on the contrary, that the Babylonians were very little solicitous about writing their history. Even their astronomical observations were very unexact till the reign of Nabonassar. It was not till after that monarch, that the Babylonians began to introduce some order into their chronology, and to write exactly the date and series of their celestial observations^t. These facts appear certain, not only by the testimony of ancient historians, but also by that of the most celebrated astronomers of antiquity. Hipparchus, Timochares, Aristyllus, Ptolemy, &c. who had examined with great care the monuments of ancient nations, make mention of no astronomical observation anterior to the reign of Nabonassar^u.

Let us now examine the source of the Egyptian antiquities. It is neither purer nor more authentic than that of the Babylonian antiquities. It does not even rise absolutely so high. Manetho, as I think I have already proved,

^s *Apud Syncell.* p. 207.

^t See *ibid.*

^u See Marsh. p. 474. ; Stanley *de Chald.* philof. sect. I. c. I. p. 1110

was incontestably the author of it *. This Egyptian priest, to give some colour to his impostures, has employed a different artifice from that of Berofus; but it is not more difficult to discover the weakness of it.

The Egyptians, like most ancient nations, pretended to have been originally governed by the gods. Manetho availed himself of that popular opinion to establish the antiquities of his nation. According to him, Egypt had been at first governed by a great number of gods †, some of whom had reigned more than 1200 years each ‡. Manetho had even made a particular epocha of the reign of Vulcan, the first of those gods, who, according to his chronicle, had governed Egypt for 9000 years §. It is after this calculation, no doubt, that Diodorus has said, that the Egyptians assigned to the reign of the gods a space of 18,000 years ¶. The term is still modest; for, according to other chronologers, the Sun, to whom they gave the honour of having first governed Egypt, had reigned there 30,000 years **. This reign of the gods was, as we perceive, an excellent resource for lengthening out the duration of the Egyptian empire, as far as they thought proper: for, I have already said, some carried it to 100,000 years ††, others to 48,863 ‡‡, some to 36,525 †††, and, in a word, to 33,000, to 23,000, to 10,000, &c. It is true, the Egyptian priests, to give authority to their lies, advanced, that, since the origin of their monarchy, they had observed 373 eclipses of the sun, and 832 of the moon ††††. But the reflection I made above on the few resources which Hipparchus, Ptolemy, &c. had found in the astronomical records of the Babylonians, suffice to destroy all these false allegations. In effect, no observations were known in antiquity

* *Supra*, p. 270.

† Syncell. p. 18.

‡ Diod. l. i. p. 32.

§ Syncell. p. 18.

¶ L. i. p. 53.

** Syncell. p. 51.

† August. *de civit. Dei*, l. 18. c. 40.

‡ Diog. Laert. in *proem.* segm. 2.

†† Syncell. p. 51. C.

††† Diod. l. i. p. 53. 30. 26. 28.

†††† Diog. Laert. *loco cit.*

more ancient than those of the Babyloniansⁱ. Nevertheless, they went no farther back than to about the year 747 before the Christian æra^k.

The second method which Manetho put in practice to lengthen out the duration of the Egyptian monarchy, was a little less gross than that I have just spoke of. It has been shewn, that Egypt, like all the other countries of the universe, had been originally divided into many little states^l. Instead of instructing us in this fact, and giving us separately, the catalogue of the princes who had reigned at the same time over different parts of Egypt, Manetho found it more to his purpose, to unite the whole in one and the same catalogue. He would, in consequence, have it believed, that every one of these princes had successively reigned over all Egypt. It is thus, that this impostor contrived to make out that astonishing list of successive dynasties spoken of by some authors, who wrote since Manetho. But the artifice has been discovered a long time, and proved so as to admit of no reply^m. We know, in a word, that Manetho had contrived all this fine chronology only by the example, and in imitation of Berosusⁿ.

Let us now speak of the 11,340 years, which, according to Herodotus, the Egyptian priests gave to the duration of their monarchy. We see, at once, that there is a great difference between this calculation and that given out in Plato; since, according to this philosopher, the Egyptians, in the time of Solon, reckoned only about 9000 years of antiquity, and yet there were but an hundred years be-

ⁱ Symplicius in lib. 1. Aristotel. de cælo, fol. 27. recto. in l. 2. fol. 117. verso.

^k Marsh. p. 474.

^l Part 1. b. 1. p. 14.

^m See Marsh. p. 23. 25. & 29.; Pezron, antiq. des tems, c. 13. p. 165.; Newton, chronol. of Egypt, p. 216. 217. & 277.; Lenglet, methode, t. 1. p. 173.; Acad. des inscript. t. 19. p. 14. 15. 17. 23. 24. 29.

Let us observe, that no mention is made of these pretended dynasties in Herodotus, the most ancient historian we have of profane antiquity, and who, besides, appears so well instructed in the history of Egypt. He does not even appear to have known the word *dynasties*. Neither is it mentioned in Diodorus.

ⁿ See Syncell. p. 16.

tween Solon and Herodotus. But I have already said it, even this last calculation still offends greatly on the score of fidelity and exactness. Some very plain reflections will, I think, be sufficient to demonstrate the little credit that is to be given to it.

Let us call to mind that conceited opinion which the Egyptians always had of the antiquity of their origin^o, and the affectation with which they made a parade of it^p, above all towards the Greeks^q. This principle admitted, every thing leads us to believe, that the Egyptian priests would omit no occasion of presenting to Solon and Herodotus, calculations proper to maintain their ridiculous pretension. It was, moreover, very easy for them to impose in this article. The Greeks, in general, were not disposed to contradict the Egyptians. Besides, the ancient nations applied themselves very little to chronological discussions. Each had formerly a fair stage for displaying the most absurd fables about their origin.

The slightest attention, nevertheless, would have been sufficient to have shewn Herodotus, that the narration of the Egyptian priests destroyed itself. They reckoned from their first king to the time of Sethon 341 generations, 341 kings, and 341 pontiffs^r. Such a concurrence is not in the order of nature. There did not, therefore, need much judgment to perceive, how much such a fact was contradictory. But I have already said it, the Greeks did not look so narrowly, especially in regard to the Egyptians. Furthermore, there is even no appearance that it was originally possible to keep an exact account of the first reigns, considering the little care, and even the little means that the first people had to preserve an exact remembrance of events^s.

I shall add, that in regard to the Egyptians in particular, their ancient annals must have been in great disorder.

^o See Herod. l. 2. n. 2.

^p See Isaiah, c. 19. v. 11.

^q See Plato in Tim. p. 1043. & 1044.

^r Herod. l. 2. n. 142.

^s See what I have said upon this subject in the chapter where I treat of the origin of writing. Part I. b. 2. c. 6.

History does not permit us to doubt it. We see, that when Cambyfes, the fon of Cyrus, became master of Egypt, he persecuted the priests, that is, the learned of the country, and set fire to the temples^t. It was, we know, in these temples that the Egyptians preserved their annals, the custody of which was intrusted to the priests^u. It may be judged, what degree of certainty the history of Egypt may have obtained since that event. Artaxerxes Ochus gave it afterwards a stroke at least as fatal. This prince caused all the copies of the sacred archives to be transported into Persia^x. Bagoas, one of his eunuchs, some time after, say they, obtained for the priests a permission to ransom them. But this last fact appears to me suspicious. It may very well have been invented only to given some appearance of truth to the Egyptian antiquities, by making it believed, that they rested upon authentic monuments, such as the sacred archives, which contained the whole history of the nation. However that may be, supposing even that these ancient deposits were restored to the Egyptians, we are sensible that they could not be in a good condition. It is probable, that those who carried them off, would not take all the precautions necessary to prevent these manuscripts from suffering by their transportation into Persia, and they must also have been impaired in bringing back from Persia into Egypt. All these voyages must infallibly have spoiled and considerably damaged the ancient registers.

Upon the whole, and this is a reflection to which I do not see that any thing solid can be opposed, if the Egyptians and Babylonians had preserved records as precise and as exact as they would persuade us, why does there reign so much confusion and uncertainty in their chronology? why do the calculations presented by writers of antiquity, differ from each other so excessively as we have seen? why, in a word,

^t Herod. l. 3. n. 29. & 37.; Diod. l. 1. p. 55.; Plin. l. 36. sect. 14. p. 735.; Strab. l. 17. p. 1170. C.

^u Plato, p. 1243.; Diod. l. 1. p. 84. l. 16. p. 122.; Syncell. p. 40. B.

^x Diod. l. 16. p. 122.

do the annals of Babylon and of Egypt afford, for so many ages, only simple catalogues of kings without relating the least fact or smallest event? But, will they say, the most of these kings were indolent princes, whose actions did not deserve to be transmitted to posterity. Be it so; but under these same idle kings, there must necessarily have happened some events, especially during so long a series of ages as that here in question. Whence comes the profound silence in this respect, that is remarked in the histories of Egypt and Babylon, histories, which, nevertheless, recite the names of all these sovereigns, and even the precise duration of their reigns? Was it not incomparably more easy to retain the memory of the principal events which happened in these reigns, than the names of so many sovereigns, and above all, than the number of years that they were said to have occupied the throne. A comparison will place this objection in its full light.

The last kings of the Merovingian race, for example, are reproached with having passed their lives in shameful idleness, which has even given them the name of the *Slothful Kings*. The detail of their actions is now entirely unknown to us. Even the precise duration of many of their reigns, suffers many difficulties. Nevertheless, we are not ignorant of the principal events which then happened in France. It is true, we lose sight of the monarchs, but we see the actions of their mayors of the palace. In a word, the history of France furnishes, in these obscure reigns, the detail of many events; such, for instance, as battles, foundations of monasteries, dissensions, commotions, statutes, &c. It was not the same with the Egyptian and Babylonian chronicles. In them were found the names of a number of kings, and the precise duration of their reigns; but beyond that, no detail, no mention of any event fallen out in those times in Egypt, or at Babylon. This single reflection suffices, I think, to unmask the imposture of Berofus and Manetho. It is not difficult to forge at random a list of kings, and to assign at pleasure any duration to their reigns; but it is not so easy to arrange

range an uninterrupted series of events relating to each other, connected in fine, and continued for thousands of ages. Accordingly we see, that the sound judges of antiquity were the first to turn into ridicule these fabulous chronicles which presented no fact, nor any event.

Cicero expresses his sense of them in the most formal terms ^y. Diodorus gave no faith to them ^z. Aristotle, by what appears, was far from being convinced of that high antiquity which the Egyptians were fond of boasting ^a. Plutarch formally combats it ^b. Varro, one of the most learned men who perhaps ever appeared, makes the origin of this people go no higher back than to a little more than 2000 years before the times in which he wrote ^c; that is to say, to about the year 2120 before the Christian æra. Herodotus himself does not seem to have given much credit to the 11,340 years which were mentioned to him by the priests of Egypt. I judge so by the manner in which he treats the successors of Menes, who, he says, was the first sovereign of Egypt. He passes over a series of kings to the number of 330, declaring, that he does not dwell upon them ^d. Herodotus undoubtedly regarded that list as apocryphal and forged, the rather as, by the confession of the Egyptian priests themselves, no event of which it was possible to say any thing, could be found in the whole duration of the reigns of these pretended kings ^e. Diodorus has done much the same thing. Of 470 kings and five queens which in the annals are said to have occupied the throne successively ^f,

^y *Contemnamus etiam Babylonios. Condemnemus inquam hos, aut stultitie, aut vanitatis, aut imprudentie, qui CCCC LXX. millia annorum, ut ipsi dicunt, monumentis comprehensa continent, et mentiri judicemus, nec seculorum reliquorum judicium, quod de ipsis futurum sit pertimescere. De divin. l. i. n. 109.*

^z L. i. p. 30. l. 2. p. 145.

^a *Metereolog. l. i. c. 14. p. 547. D.*

^b *In Numa, p. 72. B.*

^c *Apud Augustin. de civit. Dei, l. 18. c. 40. See also A. Gell. l. 14. c. 1. p. 633.*

^d L. 2. n. 100. 101. & 102,

^e *Ibid, n. 101.*

^f *I. i. p. 53.*

he speaks only of fifteen or sixteen. In a word, I repeat it, we see very clearly, that neither Herodotus nor Diodorus were able to extract from the Egyptian annals, a series of facts barely capable of filling up the space of time which is known to have elapsed from the deluge, to the destruction of the ancient Egyptian empire by Cambyse^s. This reflection falls still more strongly upon the antiquities of the Babylonians. We perceive in their history many chasms, and a void still more immense. There even remains no monument of this people; whereas the obelisks, the pyramids, and the ruins of many other grand edifices, attest at this day that the Egyptians once subsisted in splendor.

For the rest, I have seen some persons pretend, that the construction of the monuments I have just spoke of, necessarily supposes, that the Egyptian monarchy must have subsisted during a very great number of ages. I own I am very far from being of such an opinion. Thousands of ages were not necessary to accomplish the raising these monuments much too greatly boasted of. I think a simple reflection will make this clear.

The Incas, that is to say, the first sovereigns of Peru, had constructed many works, several of which are equal, if they do not even surpass the most famous Egyptian monuments. In the number of these I shall place the two roads which lead from Cusco to Quito; one of them carried on through the rocks and precipices of the mountains of Cordiliere; and the other along the sea-coast upon a quicksand for near 500 leagues of country: the temple of the sun, the citadel and the palace of Cusco, another royal house, the ruins of which are still to be seen near to Cannar^a; the ancient temple of Cayambeⁱ, a great number of canals amongst which there was one twelve feet deep, and more

^s See the chronology of Newton.

^a See Garcilasso de la Vega, *hist. des Incas*, l. 9. c. 13. l. 3. c. 20. 21. &c.; *Voyage de Coreal*, t. 1. p. 364. & 365.; Acosta, *hist. des Ind. Occident.* l. 6. c. 14.; *Hist. gen. des voyages*, t. 13. p. 571. & 579.; *Hist. des Incas*, t. 1. p. 264. 265. 292. 293.

ⁱ *Journ. des scav.* Juin. 1757, p. 351.

than 120 leagues in length, &c^k. For the greatness of the labour, for the difficulty, and for the expence, we may very well compare these monuments to the obelisks, the pyramids, the temples, and the palaces of Egypt. The monarchy founded by the Incas subsisted however only about 350 years under thirteen kings^l. I might also speak of the sovereigns of Mexico, who in like manner executed surprising works^m, and whose empire nevertheless did not subsist so long as that of the Incas.

The monuments raised by the first inhabitants of Egypt, can therefore in no manner serve to prove the antiquity of that people. They can be the less adduced for that purpose, as, according to all appearances, they were executed in a very short time. Egypt was formerly extremely populous. This is a fact which cannot be called in question. All the writers of antiquity agree in attesting itⁿ. It was even by means of that immense multitude of inhabitants, that, according to their testimony, the ancient monarchs of Egypt accomplished the raising the quantity of monuments which have rendered that empire so famous^o. From this reflection, we become easily sensible, that the Egyptians may have finished their most famous enterprises in a very few years. They employed to the number of 300,000 men at a time to execute a work^p. Such was in general the taste of all the ancient nations: they were impatient to accomplish their wishes. Berossus says; that the superb palace of Babylon had been built in fifteen days^q. The Chinese employed only five years to perfect their great wall^r. We might cite

^k Voyage de D. Ant. d'Ulloa, t. 1. p. 422.; Hist. des Incas, t. 1. p. 166. & 167.

^l Acosta hist. nat. des Ind. l. 6. c. 19. fol. 370. verso.

^m Hist. gen. des voyages, t. 12. p. 430. &c. Gemelli, t. 6. l. 2. c. 8.

ⁿ See les mem. de Trev. Janv. 1752, p. 32. &c.

^o Diod. l. 1. p. 36. & 37.

^p See Herod. l. 2. n. 124.; Diod. l. 1. p. 73.; Plin. l. 36. sect. 14. & 17.

^q Apud Jos. antiq. l. 10. c. 11. sub fin. This fact without doubt is exaggerated; but however it proves the constant practice in Asia of employing very little time in the construction of the most immense works.

^r Martini, hist. de la Chine, l. 6. t. 2. p. 40. & 41.

many other examples of immense enterprises executed in a very little time by the Orientals^r. It must certainly have been the same amongst the Egyptians. Thus their obelisks, their pyramids, their palaces, their temples, &c. can by no means authorise the conjectures that are attempted to be drawn from these monuments to establish the antiquity of the Egyptian empire. All these allegations fall of themselves. The facts which the reader has just seen, destroy them absolutely.

It even appears to me demonstrated, that the Egyptians had not much more knowledge of architecture, of sculpture, and of the fine arts in general, than the Peruvians and the Mexicans. For example, neither one nor the other knew the secret of building of vaults^r. What remains of foundery or sculpture, is equally clumsy and incorrect. I think this observation absolutely essential. This sort of skill in reality cannot be acquired but by length of time. The Egyptian monarchy, though much more ancient, and though it continued for many more ages than that of the Peruvians and of the Mexicans, yet did not subsist long enough for these people to acquire the lights and the skill which they have always failed of in many branches of the arts. The Egyptians, as well as the Peruvians and Mexicans, were even destitute of certain arts, to which their seeming meanness, and more our habitual use of them prevent us from giving attention; but the invention of which has done more honour to human genius, than all the prodigious monuments I have spoke of.

It were still vain to attempt to establish the pretended antiquity of the Egyptians upon the progress that these people had made in the demonstrative sciences. Their knowledge in this respect was very imperfect. The reader may recollect the details I entered into upon this subject in

^r See L'hist. gen. des Huns par M. de Guignes, t. 4. p. 208. & 209.

^r See part 3. book 2. c. 2. p. 59. & 67.: Acosta *loco cit.* fol. 292. *verso.*; Hist. gen. des voyages, t. 13. p. 580.; Garcilasso de la Vega, l. 7. c. 11. t. 2. p. 192.; Hist. des Incas, t. 1. p. 167.; Mem. de l'acad. de Berlin, t. 2 ann. 1746, p. 448. 451. 452.

the article of sciences^a. One single example is enough to shew the little extent of their discoveries. In the time of Herodotus, that is to say, about the year 450 before the Christian æra, the Egyptian astronomers did not yet know, that the length of the solar year is more than 365 days^x. We may judge by this fact, which is very certain and well proved, of the progress which the ancient inhabitants of Egypt had made in the demonstrative sciences. In a word, and this is a reflection that cannot be too much insisted upon, near 500 years before J. C. Democritus and many other philosophers, who maintained, that the world had had a beginning, applied themselves to prove the newness of it by all the means that history and critical knowledge could furnish; yet we do not see, that it was ever undertaken to refute them solidly^y, although nothing would have been easier if the pretended antiquities of the Babylonians and Egyptians had had any reasonable foundations.

Let us finish by a glance upon the antiquities of the Scythians. They will employ us but a moment. These people, according to Trogus Pompeius, and of Justin his abridger, were acknowledged to be of more ancient origin than the Egyptians^z. The Scythians, however, in the time of Herodotus reckoned only one thousand years of antiquity^a.

We may moreover apply with great justice the reflections I have here made upon the antiquities of the Babylonians and Egyptians to those of the Chinese. According to the popular ideas of the Chinese, the origin of that nation would ascend to thousands of ages. I say according to the popular ideas, because the learned of China are the first to deride and give up that fabulous antiquity^b. That pretension is not even very ancient in China. It arose in pretty

^a Part 2. book 3. c. 2. part 3. book 3. c. 2. art. 2.

^x See *supra*, book 3. c. 2. p. 101. 102.

^y See Jaquelot, dissert. sur l'existence de Dieu, t. 1. p. 265. &c.

^z L. 2. c. 1. p. 60. ^a L. 4. n. 5. 7.

^b Martini, hist. de la Chine, t. 1. p. 7.; Lettr. édif. t. 21. p. 119. 120; Hist. des Huns par M. de Guignes, t. 1. part 1. p. 2. & 3.

modern times^c; another conformity with the Egyptian and Babylonian antiquities, unknown, as I have made it appear, to the most ancient and most learned writers of Greece and Rome. Besides, what dependence can we have upon the certainty of the Chinese chronology for the early times, when we see these people unanimously own, that one of their greatest monarchs interested in the destruction of the ancient traditions, and of those who preserved the memory of them, caused all the books which did not treat of agriculture, or of medicine, or of divination, to be burnt, and applied himself for many years to destroy whatever could recall the knowledge of the times anterior to his reign*. About forty years after his death, they wanted to re-establish the historical monuments. For that purpose they gathered together, say they, the hearsays of old men. They discovered, it is added, some fragments of books which had escaped the general conflagration. They joined these various scraps together as they could, and mainly endeavoured to compose of them a regular history. It was not however till more than 150 years after the destruction of all the monuments, that is to say, the year 37 before J. C. that a complete body of the ancient history appeared. The author himself who composed it, Sse-Ma-tsiene, had the candour to own, that he had not found it possible to ascend with certainty 800 years beyond the times in which he wrote.

Such is the unanimous confession of the Chinese^d. I

^c See l'histoire abrégée de l'astronomie Chinoise par le P. Gaubil, dans les observations mathem. du P. Souciet, t. 2. p. 16. 17. & l'hist. des Huns par M. de Guignes, t. 1. part 1. p. 2.

* This event happened 213 years before the Christian æra. by the order of Chi-Hoam-ti. This monarch, excepting his aversion to letters, was a very great prince. His abilities and firmness were equal, and he succeeded in the execution of his project of suppressing all historical books. That destruction was by so much the more complete, as the use of paper was not known at that time. They drew characters upon tablets or upon little plates of bamboo, which rendered the smallest writing of considerable bulk, and, of consequence, very difficult to conceal. Acad. des inscript. t. 10. p. 381. t. 15. p. 529.; Relat. du royaume de Siam par la Loubere, t. 2. p. 376. & 377.

^d Acad. des inscript. t. 10. p. 381. 382. 383. 388. t. 15. p. 506. 528. 529. 532. 543. 552. & 561.

leave to be judged, after such a fact, the certainty of their ancient history *. Accordingly we find, in treating of it, unfurmountable difficulties and contradictions. The variations that are remarked in the principal epochas †, prove, that the history of the Chinese has no superiority nor any advantage over other profane histories. There runs through it an uncertainty like that which the chronologists find in their rescarches into the history of the Babylonians, the Egyptians, and in that of the first kings of Greece. Besides, it is equally destitute of facts, circumstances, and details.

As to the astronomical observations on which it has been attempted to establish the pretended antiquity of the Chinese, it is long since the celebrated Cassini ‡, and many other writers of merit §, have said enough of them to discredit all that apparatus visibly inserted after date. The forgery is even so plain, that it has been perceived by some of the

* The only monuments upon which the ancient history of the Chinese can be established, are, 1. Some fragments of the moral works of Confucius, and a very dry and short chronicle of the history of his province. That chronicle ascends only to the year 722 before J. C. Confucius lived about the year 450 before the Christian æra. Acad. des inscript. t. 10. p. 382. t. 15. p. 540. 2. A moral work of the philosopher Meng-tze who lived about the year 320 before J. C. Ibid. t. 18. p. 206. & 207. 3. The *Tschou-chou*, a very summary chronicle, composed about the year 299 before J. C. and found about the year 264 of the Christian æra. Ibid. t. 15. p. 537. t. 18. M. p. 215. 218. & 228. 4. The body of history composed by Sse-ma-tsiene, and published the year 37 before J. C. Ibid. t. 15. p. 543. Sse-ma-tsiene is looked upon as the father of history amongst the Chinese. A collection of the facts comprised in all these monuments, would scarce make a little volume in 12° of ordinary print. All the other Chinese writers are greatly posterior to those I have named. Yet it is very certain, that they have had no other helps, and that no other ancient monument has been yet discovered. Acad. des inscript. t. 18. M. p. 194.

† See *Phil. gen. des Huns* par M. de Guignes, t. 1. p. 5. 6. 10. 14. &c.; Acad. des inscript. t. 10. p. 381. 388. 393. &c.; Journ. des scav. Decembre 1757, p. 817. & 818.

‡ Anc. mém. de l'acad. des scienc. t. 8. p. 284. 303. 307.

§ Jaquelot, dissert. sur l'existence de Dieu, t. 2. p. 97. 102. & 103.; Ancien. relat. des Ind. & de la Chine, p. 350. 354. 358.; Spectacle de la nature, t. 8. p. 37.; M. Freret, dans les mem. de l'acad. des inscript. t. 10. p. 393. 394. 395. 396. t. 18. p. 198. 210. 224. 280. It is true, that in the sequel M. Freret seems to give up that notion; but I own, that the reasons which appear to have convinced him, persuade me not at all. See t. 18. p. 242. & 247. &c.

literati

literati^a, notwithstanding the little notion which the Chinese in general have of critical knowledge. We may affirm boldly, that till the year 206 before J. C. their history deserves no faithⁱ. It is a continued jumble of fables and contradictions^k, a monstrous chaos from which nothing coherent and reasonable can be extracted.

What we know of the origin of the greatest part of the arts and sciences, would alone suffice to demonstrate the fallacy and the ridicule of all the fabulous antiquities I have here spoke of. We see very clearly the most essential discoveries, the most necessary arts take rise or introduce themselves successively in the different parts of the universe. We can even trace their progress to a certain point, and discover enough of it to be convinced, that our whole knowledge is not very ancient. The newness of arts and sciences is a sensible proof of the little antiquity of the world. We should not at this day have the least trace, the smallest vestige of their origin, if it was as distant from us as the pretended chronicles of certain nations would make us believe. Nevertheless the reader may have remarked, that we are by no means destitute of lights and information upon all these objects. This reflection is by so much the more strong, and proves so much the better the little antiquity of the world, as the tradition of the earliest events could only be preserved by the memory. It is a proof, moreover, the force of which has been felt by such of the ancient philosophers as are the least to be suspected of credulity. The newness of arts and sciences has always been the principal argument they made use of to maintain that of the world^l.

We may draw a proof equally invincible from the imperfection of many of the arts in the ancient world, and

^a Acad. des inscript. t. 10. p. 396. t. 18. M. p. 220. 221. 239.

ⁱ Acad. des inscript. t. 10. p. 380. 381. 388.

^k Jaquelot, *loco cit.* p. 98. &c.; Spectacle de la nat. t. 8. p. 35. & 36.

^l See Lucret. l. 5. v. 331. &c.; Macrobi. in somn. Scipion. l. 2. c. 10. p. 153.

See also Jaquelot, *diff. sur l'existence de Dieu*, t. 1. c. 12.

of all the sciences which depend upon length of time and experience. I might speak also of the absolute ignorance of even the most civilized of the ancient nations, touching a great number of most useful and most important discoveries that we enjoy at this time. But I think I have said enough upon all these objects in the course of my work, to be dispensed with insisting upon them any longer.

DISSER.

DISSERTATION IV.

Examination of a passage of Diodorus, taken from the second book of that historian, N^o 142.

THE fact which we are about to examine in this dissertation, has an intimate relation with the antiquities of the Egyptians, on which we were employed in the preceding one. For this reason, and that I might leave nothing to wish for upon that subject, I have thought proper to give a particular attention to it. The reader will easily perceive, that, apart from such a consideration, the passage of itself would not deserve the smallest reflection.

The passage in which Herodotus has transmitted to us the tradition of the fact intended for the subject of this dissertation, has given a great deal of trouble to modern critics, without any of them having accomplished the clearing it up in a satisfactory manner. We do not flatter ourselves with better success. On the contrary, the few reflections we are about to propose, tend only to shew, that it is morally impossible to make out a reasonable meaning from the expressions of Herodotus in this passage.

The text in question has been hitherto very ill rendered in all the translations commonly made use of; for which reason, we have thought fit to begin by giving a literal and faithful version of it.

“ They (the Egyptian priests) said, that during this time
 “ (the time in question was 11,340 years, which, according
 “ to the fabulous tradition of the Egyptians, had elapsed
 “ from the origin of the Egyptian monarchy to the reign
 of Sethon), the Egyptian priests then said, that, during
 “ that interval of time, the sun had risen four times where
 “ he is accustomed commonly to set; to wit, that twice
 “ that

" that star had risen where he now sets, and twice had set
 " where he now rises; but that this had occasioned nothing
 " extraordinary in Egypt, either in regard to the pro-
 " ductions of the earth, or in regard to the overflowings
 " of the Nile, or in regard to distempers, or in regard to
 " mortality." Such is the literal translation of the passage
 we are to discuss. We have absolutely neglected style and
 elegance, lest we should have failed in point of fidelity.

There are, I believe, few persons who do not, at the
 first glance, perceive something ambiguous in this narration
 of Herodotus. The most natural sense that can be given
 to the words of this historian, is, that, during the 11,340 years
 in question, the diurnal motion of the sun had changed at
 two different times, and had afterwards, at two different
 times, returned to be the same that it was before the first of
 these two variations which I suppose; insomuch that, in the
 course of the 11,340 years in question, they had seen, during
 four different parts of that period, the sun move one way,
 and during two other parts move the contrary way, and
 that alternately.

Here is in what precisely consists the great difficulty of the
 passage that we examine. If Herodotus had said, that, du-
 ring the course of the 11,340 years in question, the sun
 had risen three times where he is accustomed to rise, and
 that twice that star had risen where he now sets, the fact
 had been certainly very extraordinary, yet it would not
 have been absolutely inconceivable. But that two changes
 of state, which bring precisely only two returns to the pri-
 mitive position, should, by their combination with the pri-
 mordial state, furnish during any time whatever four alter-
 natives of that primordial state, this implies contradiction.
 A very simple example will make this be perceived with
 the utmost evidence.

Let us observe a tree for two succeeding years. If the
 observation begins in summer, we shall see this tree thrice
 clothed with leaves, and twice stripped of them during that
 space of time; and that alternately. If the observation

begins in winter, we shall see, on the contrary, this same tree stripped of its leaves at three different times, and it will be seen clothed with leaves, during only two of the five alternatives it undergoes, in the course of the two years in question; being stripped of its leaves, will be the primordial state of that tree in the second case. It will be the contrary in the first. But in one and the other case, two changes of condition operate only three alternatives in the primordial state. It is consequently absurd and contradictory, that two changes of the direction of the diurnal motion of the sun, during any period whatever, should ever operate four alternatives of the state in which that direction was, when the period in question began.

It is this absurdity, without doubt, which has led the common interpreters of Herodotus, to translate the passage we discuss in a manner entirely different from ours. They make Herodotus say, "that, during the course of 11,340 years which had, they said, preceded the reign of Sethon, the sun had risen four times in an extraordinary manner, to wit, that twice he had risen where he now sets, and twice he had set where he is now accustomed to rise."

But in avoiding one rock, have not these interpreters split upon another, at least as dangerous as that they wanted to shun, by putting Herodotus in contradiction with himself in the same phrase? According to them, that historian says at first, that, during the 11,340 years he speaks of, the sun had risen four times in an extraordinary manner; and then immediately they make Herodotus say, that during this same time the sun had risen twice where he commonly sets, and set twice where he is accustomed to rise; that is to say, that twice only the sun had risen and set in an extraordinary manner. Was there ever a more palpable contradiction?

Independently of the two explications which we have just examined, which are both at the bottom alike contradictory and absurd, only with this difference, nevertheless, that in one of them the contradiction is less striking than

than in the other, some commentators proposed a third interpretation of it.

If we may believe these new critics, Herodotus has said, not that the sun had risen four times in an extraordinary manner, during the period in question, but that the course of this star had undergone four changes; to wit, two in his rising, and two in his setting. This explication, as we see, is not much more satisfactory than all those I have just given an account of. When the sun rises where he commonly sets, it is necessary that he set where he is accustomed to rise, as we have already made it be observed more than once; of consequence, two changes in the rising of the sun, and two changes in his setting, will never make more than two, and not four changes in his diurnal motion. Besides, this sense is absolutely contrary to the text of Herodotus, who makes use of a term, which cannot exactly signify any other thing than the rising of the sun *; and never the motion or the course of that star.

From all these reflections we ought to conclude necessarily, that the passage in question, taking it according to Herodotus's own expressions, is susceptible of no reasonable explication. Yet I think I discover in it a glimpse of an ancient tradition upon an extraordinary event, which well deserves our attention to discuss it. It is solely upon this object that we shall employ our reflections.

Whatever fine genius Herodotus had received from nature, and however extensive was his knowledge in many respects, we may very easily convince ourselves that he was very weak on the side of astronomy. When he relates, for example, that maritime expedition which the Phœnicians undertook, by order of Nechos King of Egypt, round Africa, setting out by the ports of the Red sea, and returning again by the Mediterranean, he cannot persuade himself, that these travellers had, as they reported, seen the sun upon their right hand †; that is to say, that they had seen him

* Ἀνατελλαι.

† Book 4. n. 42,

reach, and even pass their zenith, and be successively on each side of their first vertical point *. Yet this fact has nothing astonishing for any one who has the least tincture of cosmography.

It were not difficult to find other proofs of the little knowledge that Herodotus had of astronomy ^b. What we have just said, is enough to shew, that it is no wonder that this historian should have advanced an astronomical paradox. We may even add, that the Egyptian priests, from whom Herodotus says he received the fact he relates, had no doubt imparted it in their usual manner, that is, greatly wrapped up, and absolutely enigmatical. Herodotus, in relating it, will have completed its obscurity, by not comprehending the language of the Egyptian priests.

If we might consider in this sense the passage we examine, it were easy to get rid of the perplexity, by saying, that Herodotus intending to speak of a matter which he understood not, and which it was even difficult that he should understand, it would be in vain for us to endeavour at this day to come at his meaning even from himself. But this passage, such as it has come to us, is not less shocking to good sense than to astronomy, as we have shewn above. Herodotus, though little versed in that science, was not the less a genius of the first order, and possessed of as much judgment as any writer of all antiquity; it would therefore, in our opinion, be doing outrage to his memory to

* To understand this passage, we must know, that the ancients, to determine the position of the four cardinal points, with respect to any spectator, supposed him turned towards the west. Standing in that manner, he had the north to his right, and the south to his left. We may see in the first book of the *Meteors* of Cleomedes, p. 13. upon what that supposition is founded. From that custom it is easy to see, that those who inhabit the northern part of the torrid zone have the sun on the right, that is, to the north, during all the time which that star employs in running through the northern signs. Those, on the contrary, who are in the southern part, have the sun on their left, that is, to the south only, when his meridional declination exceeds the latitude of their habitation.

^b See l. i. n. 32. the monstrous calculation of intercalary months which that author makes Solon make. See also *supra*, book 3. chap. 2. art. 2. p. 109. & 191.

look upon this passage as subsisting at this day, such as it came from the hands of its author. There is all appearance, on the contrary, that the text is considerably altered in that place, as in an infinity of others, where the errors of transcribers were, however, much less to be feared. No body, I believe, is ignorant that there are few ancient authors whose text has suffered so much from the injuries of time and the errors of transcribers, as that of Herodotus. It were necessary, of consequence, before we undertake to explain the passage in question in a satisfactory manner, to restore it by the authority of some manuscript, such as perhaps is not to be found.

For want of such a help, the modern critics have abandoned themselves to abundant conjectures, which, for the most part, appear at first sight weak, and even often ridiculous. We have therefore thought them unworthy of notice.

One there is, however, which being truly ingenious, deserves, for that reason, a particular attention, though, to say the truth, it has no more solidity than the other conjectures by which the passage in question has been attempted to be explained. A modern author, who has justly obtained the most brilliant reputation, by an union of various talents rarely to be found in one and the same person, has placed this last conjecture in all its light. We rather chuse to refer those who would be acquainted with this system to what he says of it, than to give a detail which would never have the elegance and amenity which that ingenious writer has diffused over all the subjects he has undertaken to handle. The reader will find in his work all that can be said in favour of that opinion, and even some of the reasons which may render it problematical^c.

For what remains, if the tradition of a change in the motion of the sun was related only by Herodotus, I think that the critics would have given less attention to the pas-

^c Elements of Newton's philosophy made easy to all the world by M. de Voltaire.

sage of that author; but we find this same tradition in many other writers, always indeed in a very confused manner.

Plato relates in one of his dialogues, that, in the time of Atreus, the motion of the firmament had changed, in such a manner that the sun and all the stars had begun to rise where formerly they had set, and to set where they had been accustomed to rise; in a word, the machine of the world was moved in a way contrary to that in which it had been before. He accompanies this relation with so odd a detail of the effects of this change, and with such singular physical explications, that it is easy to see he spoke only from a tradition extremely confused and perplexed^d. We judge also from a passage in his *Timæus*, where, in two words, he brings in this event, that Solon who was the first who made the Athenians acquainted with it, had drawn it from Egypt, that is, from the same source as Herodotus^e. Pomponius Mela speaks also of the same tradition^f; so does Plutarch^g, Diogenes Laertius, and many other writers of antiquity^h. They appear all to have had some knowledge of a period like that which is the subject of this dissertation; but none of these authors have spoke of it in an intelligible manner. They express themselves for the most part with as little exactness as Herodotus.

Upon the whole, bringing together the different testimonies of antiquity which may have any relation to the passage we examine, they all agree in telling us, that the Egyptians, and, perhaps, even some other ancient nations, had preserved a confused tradition of one or more changes which the diurnal motion of the sun had undergone, although otherwise most of these testimonies are totally repugnant with respect to the nature, the number, the time, and the duration of these changes. This agreement upon

^d In politico, p. 535.

^e In Tim. p. 1043. &c.

^f L. I. c. 9. p. 60.

^g De placit. philos. l. 2. c. 24. p. 890. & 891.

^h Achil. Tatius de Arati phænomen. c. 24. p. 147.; Solinus, c. 32. p. 44. G. &c.

the

the fundamental point of the narration of Herodotus, is that, no doubt, which has piqued the curiosity of the learned. It has made them believe, that it might be possible to discover what could have given rise to the belief of a fact so extraordinary. As the little conformity amongst ancient authors with regard to the manner in which this phenomenon was operated, joined to the circumstances which had accompanied it, left an open field for the imagination of our modern writers; they have abandoned themselves to conjectures one bolder than another. I think, that their example gives me a right to venture one also, which, besides the novelty of it *, will have at least the advantage of being founded on authentic facts, and not on doubtful suppositions, or upon astronomical intelligence too high for the times in question in this dissertation.

Holy scripture has preserved the history of two miraculous events, concerning the diurnal motion of the earth. The first happened under Joshua, when the course of that star was suspended during a whole day or thereabouts †. The second came to pass under the reign of Hezekiah, when the sun was seen to go back considerably, and probably about 150 degrees ‡.

Both these facts are anterior to the reign of Sethon; the first of these prodigies even preceded the reign of Atreus

* The explication I am about to propose, occurred to me before reading what P. Calmet says in few words upon this passage of Herodotus, in a preliminary dissertation at the head of the second book of Kings. He has laid down only the foundation and principles of it. I think I have further unfolded that idea.

† Joshua, c. 10. v. 12. & 13.; Ecclesiastic. c. 46. v. 5. It is of little importance, as to the reality of the miracle in itself, whether we admit the new system which makes the earth turn round the sun, or whether we follow the ancient opinion of that star's turning round the earth. Whatever system we embrace, the event I speak of will be neither less real nor less miraculous in appearance.

‡ 2 Kings, c. 20. v. 9. & c.; 2 Chron. c. 32. v. 24.; Isaiah, c. 38. v. 7. & 8.; Ecclesiastic. c. 48. v. 25. & 26. The sacred text says, that the shadow went back ten degrees upon the dial of Ahaz. There is great appearance, that each of these degrees indicated an hour, and that, of consequence, the sun went back 150 degrees of the parallel he described that day. But as this estimate is not absolutely certain, I would not precisely determine what interval of time answered to each of these degrees.

by about 200 years. This last must have prolonged the day for one half of the earth, and the night for the other half of the hemisphere, in a manner too sensible not to have been remarked, especially by nations who had any tincture of astronomy.

The circumstances of the second miracle must have been still more striking. Supposing, that the retrogradation of the sun was then 150 degrees; it is necessary that that star should have risen upon more than three thousand leagues of country successively, and that at the same point of the horizon where he had set some hours before; that afterwards he should have resumed his first course. For the same reason, they must have seen him, in the extent of more than three thousand leagues of our globe, set where he had risen, and rise anew where he had last set. With regard to the rest of the earth, the day must have been considerably lengthened in one part, and the night must have been as much longer in the opposite part. There were (supposing always the retrogradation of the sun of 150 degrees) ten hours at least from the sun's rising upon the horizon at Jerusalem, when the miracle I speak of happened. By this means, the most sensible effects fell upon the ocean. This, no doubt, was the occasion that profane authors have had but a very confused notion of it. Of all the regions of our continent, those in which this prodigy must have manifested itself in the most striking manner, are the East Indies, and the most western part of Africa, countries of which we have no historical monument.

It may have been also, that the sun having gone back with regard to Judea precisely to the point of his rising, might really have set during some minutes for Egypt, and for the most western countries at the same point where he had risen, and risen soon after resuming his ordinary course precisely where he had set. In Egypt, where the air is always serene, they might have seen that this prodigy was operated by a real retrogradation of the sun: in Greece, where, on this supposition, the phenomenon
must

must have been more sensible, the clouds having hidden his disk, was enough to have caused the sudden darkness which must, for some time, have covered the whole country, to be attributed to an eclipse¹. In a word, we may find a thousand reasons for the silence of most profane authors, as well as for the various alterations which those who speak of a change in the diurnal motion of the sun, may have made in the tradition of this memorable event. Besides, I find no motive which should hinder us from acknowledging in it the foundation and the principle of that same tradition*.

The strongest allegation that can be brought against the explication which I propose, is, without doubt, the opinion of many interpreters and commentators upon the holy scripture, who will confine the miracle operated under Hezekiah, to a simple retrogradation of the shadow of the sun, independent of the course of that star, and that again only upon the dial of Ahaz. But I do not see why they will have that retrogradation of the shadow not to have been the natural and physical effect of the actual retrogradation of the sun; why the same power, who had really suspended the course of that star, to give Joshua time to finish the defeat of the enemies of his people, should not have really changed it in consideration of a just and religious prince? The scripture tells us, that Berodach-Baladan, King of Babylon, sent to compliment Hezekiah upon the recovery of his health^m. Nobody is ignorant how great, in those times, was the power of the kings of Babylon, and how much they thought themselves above other sovereigns. We know also to what a state of weakness the kingdom of Judah was

¹ See Plut. de placit. philosoph. l. 2. c. 24. p. 890. & 891.

* It should be remarked, that an actual retrogradation of the sun, such as according to us it came to pass in the reign of Hezekiah, is the only means of producing the phenomena related by Herodotus, without causing alteration in the temperature of the places where they are undergone. On the contrary, the moving of the poles, an explication to which some modern critics seem to incline, would make the same places successively undergo the most opposite temperatures.

^m 2 Kings, c. 20. v. 12.

then reduced. Whence then could proceed that step of such a monarch as Berodach-Baladan towards Hezekiah? Is it not probable, that the miracle operated in favour of this prince was the principal cause, a miracle to which the Babylonians, amongst whom astronomy was then greatly cultivated, could not help giving a particular attention? This is not even a simple conjecture on our part; it is a fact of which sacred scripture does not permit us to doubt. It informs us, that the ambassadors of the Babylonian monarch were specially charged with informing themselves of the prodigy which had happened upon the earth^a.

I am therefore persuaded, that the miracle wrought in the time of Joshua, joined to that which was wrought some ages after in favour of Hezekiah, were the origin and source of all those confused traditions related in ancient writers upon the change which the course of the sun had twice undergone^{*}.

^a 2 Chronic. c. 32. v. 31. Attamen in legatione principum Babylonis qui missi fuerant ad eum, ut interrogarent de portento quod acciderat super terram, &c.

^{*} To form a just idea of the effects produced by the retrogradation of the sun, such as we understand it, we shall suppose that star to have been in the equator the day that this miracle happened, that his retrogradation was of 150 degrees, and that it was four in the afternoon at Jerusalem at the instant when the shadow began to go back; or, what comes to the same thing, that the sun was at that moment distant 150 degrees from the point of his rising, and that, of consequence, his retrogradation brought him back to that same point. Then placing Jerusalem, with most geographers, at the 27th degree of longitude, the 87th & 267th degrees separated that part of our globe which had day, from that which had night, at the moment when the retrogradation of the sun began; that is to say, that America, Africa, Europe, and Asia, as far as the mouth of the Indies or thereabouts, then enjoyed the light of the sun, while the rest of the world was plunged in darkness. On the contrary, at the moment when the retrogradation of the sun brought him back to the same point where he had set out ten hours before, the meridian which passes by the 57th degree of longitude, separated the lightened from the darkened hemisphere. By that, all Asia, except Anatolia, and almost all the Pacific ocean, had then day; but America, as well as Europe and Africa, had night in almost all their extent. The inhabitants of the Mogul, of the Indies, of China, of Japan, &c. in a word, all the nations which lie between the 87th and the 237th degrees of longitude, must have seen the sun rise anew upon their horizon, at the same point where he had set some time before, and set, after he had resumed his primordial direction, at the same place where his retrograde motion had made him last rise.

On the contrary, on each side of the first meridian, as far as the 57th degree of longitude on one side, and the 264th on the other, reckoning according to a retrograde order ; that is to say, in Egypt, in Greece, in Italy, &c. they must have seen the sun returning to set precisely where he had risen, and soon after resume his ordinary course, and rise anew where he had just set. Between the 57th and the 87th degree, as in Arabia and in Persia, the day must have lasted ten hours longer than ordinary. The most sensible effect of the miracle must have been a kind of balancing of the sun's disk.

We are extremely far from giving this explication as preferable in itself to any of the other hypotheses, of which a number may be equally agreeable to the text of holy scripture. We may assign to the sun what northern or southern declination we will. We may say, that it was more than four in the afternoon at Jerusalem, when the retrogradation of the solar disk began. We may, in strictness, make that retrogradation less than 150 degrees, &c. But of all cases that might be proposed, we have chosen this, as the most simple, as well as the most conformable that we can conceive, to the effects of the miracle that we examine with relation to the inhabitants of all the zones, and which gives the most easy calculation of its phænomena. It will be very easy to apply the detail, and to extend the explication of it to the other hypotheses that may be chosen, making only some slight alterations which cannot be subject to much difficulty.

*Extracts from the Chinese Historians.**By M. LE ROUX DES HAUTES-RAYES, Royal Professor.*

S I R,

YOU do me the honour to ask me concerning the book *Y-tse*; you desire to know the epocha when the Chinese discovered the art of working iron, and under which of their emperors, it is said, that their ploughshares were still only of wood. It is not difficult to give you satisfaction: but when we quote any thing from the Chinese history, it is absolutely necessary to attend, 1. To the times purely fabulous and mythological; 2. To the doubtful and uncertain times; 3. To the historical times, when the Chinese history, supported by indisputable monuments, begins to proceed on sure grounds.

We cannot make the historical times of China at the furthest ascend higher than the epocha of Yao; the doubtful and uncertain times begin at Fou-hi, and end at Yao exclusively. The emperors who precede them never existed; there remains no ancient monument to confirm the truth of the facts of which their history is composed. We have no certainty about the duration of their reigns; and from the jumble of fabulous and incredible things related of them, we may, I think, very safely expunge these emperors out of the number of those who have really existed. Every one who thinks, and reads with reflection, must be convinced of this. In a word, every thing that precedes Fou-hi is entirely fabulous, and deserves no credit.

As you have thought proper to take notice in your work of the fabulous times of ancient nations; I shall, with pleasure, run over these times in the Chinese history; delighted, if I can be of any use to you, and contribute, with respect to China, to the execution of the plan which you have followed. I begin with an examination of the fabulous or mythological times.

1. *Of*

I. Of the fabulous times.

Some ascribe to Tiene-hoang, a book in eight chapters, which contains the origin of letters. They add, that the characters used by the Sane-hoang were natural, without any determinate form, that they were nothing but gold and precious stones.

Lieou-jou, author of Ouai-ki, says, that Tiene-hoang gave names to the ten *KANE*, and to the twelve *TCHI*, to determine the place of the year: this is meant of the cyclic characters.

Tiene-hoang signifies emperor of heaven. They call him also *Tiene-ling*, the intelligent heaven; *Tsee-jun*, the son who nourishes and adorns all things; and finally *Tchong-tiene-hoang-kune*, the supreme king of the middle heaven, &c. This Tiene-hoang succeeded Pouane-cou.

The Ouai-ki says, that Ti-hoang (emperor of the earth), the successor of Tiene-hoang, divided the day and the night, and appointed thirty days to make one moon. The book Tong-li, quoted in Lopi, adds further, that this emperor fixed the winter-solstice to the eleventh moon. A proof that the Chinese year was originally very incorrect, and that the course of it was regulated only by that of the seasons, is, that for a long time, to express a year, they said a change of the leaves.

This Ti-hoang, say they, was father of Tiene-hoang, and of Gine-hoang who follows.

They give Gine-hoang (sovereign of men) nine brothers, and pretend, that they divided the government among them. They were nine brothers (says Yuene-leao-fane) who divided the earth among them, and built cities, which they surrounded with walls. It was under this prince (says Lopi), that there first began to be a distinction between the sovereign and the subject: they drank, they eat, and the two sexes united.

After these three emperors which we have just now named, they place the period named *Ou-long* (the five Long

Long or dragons) composed of five different families. But they do not tell us their names, nor the duration of their reigns. In these times (says an author) men dwelt in the bottom of caves, or perched upon trees as it were in nests. This fact contradicts the invention of building cities, and surrounding them with walls, which they place under the reign of Gine-hoang; but you will meet with many such contradictions in the sequel.

They say nothing of the third Ki. Of the fourth, named *Ho-lo*, and composed of three families, they say, that the Ho-lo taught men to retire into the hollows of rocks. This is all they say of it. Neither do they say any thing of the fifth Ki, named *Liene-tong*, and composed of six families; of the sixth Ki, named *Su-ming*, and composed of four families.

It is a folly to dwell upon the epocha of these six Ki; nothing is more absurd. Lopi cites an author who generously gives them 1,100,750 years duration; Lopi says himself, that the five first Ki after Gine-hoang make in all 90,000 years.

The seventh Ki is named *Sune-fei*, and comprehends twenty-two families. But they say nothing under all these reigns that has any relation to the arts or sciences. Only under the twenty-second and last, named *Tsee-che-chi*, they say, that it was not till then men ceased to dwell in caves. Is it not a palpable absurdity, that after so many ages, and under kings of whom they relate so many wonders, they had not yet found out the art of building huts to shelter them from the winds and rains?

The eighth Ki, named *Yne-ti*, contains thirteen families or dynasties. *Tchine-fang-chi*, the first of this period, reigned after *Tsee-che-chi*, and founded the first family. They say, that at the beginning men covered their bodies with leaves and herbs; serpents and beasts were very numerous; the waters which had overflowed, were not yet returned into their channels, and the misery of mankind was extreme. *Tchine-fang* taught men to prepare skins, to take off the
hair

hair with rollers of wood, and use them against the winds and frosts which incommoded them very much. He taught them also to make a kind of web of their hair, to serve them as a covering to their heads against the rain. They obeyed him with joy; he called his subjects, *people clothed with skins*: he reigned 350 years. To Tchine-fang-chi succeeded Chou-chane-chi, then Hai-kouei-chi, of whom they say nothing which has any relation to our subject.

The fourth prince, who also succeeded Hai-kouei-chi, was named *Hoene-tune*; he founded the fourth dynasty, (for each of these princes which we have just now mentioned, was the founder of a family or dynasty.) In the history of this king, Lopi quotes Lao-chene-tsee, who speaks thus.

“The ancient kings wore their hair dishevelled, without any ornament upon their heads. They had neither sceptre nor crown, and they governed their people in peace. Being of a beneficent disposition, they cherished all things, and put no person to death. Always giving, and never receiving any thing, their subjects, without dreading their power as masters, revered their virtue in their hearts. Then heaven and earth observed a most beautiful order, and every thing flourished in a surprising manner. The birds built their nests so low, that they might be reached with the hand; all the animal creation tamely submitted to the will of man. Then the just medium was observed, and harmony reigned over all. They did not reckon the year by the days. There was no distinction between within and without, between mine and thine. In this manner reigned Hoene-tune. But when mankind had degenerated from this happy state, birds and beasts, insects and serpents, all together, and as it were in concert, made war against them.”

To this dynasty of Hoene-tune, succeeded that of Tong-hou-chi, containing seven kings which are not named. To this fifth dynasty succeeded the sixth, whose founder was Hoang-tane-chi.

The 7th, the dynasty of Ki-tong-chi *.

The 8th, the dynasty of Ki-y-chi *.

The 9th, the dynasty of Ki-kiu-chi *.

The

The 10th, the dynasty of Hi-ouei-chi *.

The 11th, the dynasty of Yeou-tsao-chi.

The 12th, the dynasty of Soui-gine.

The 13th and last, the dynasty of Yong-tching-chi.

Of these seven kings, or founders of dynasties, which remain to be considered to complete the number of dynasties included in this eighth period, nothing is said of those I have marked * that has any relation to our subject.

As to Yeou-tsao-chi, founder of the eleventh dynasty, whose reign, they say, lasted more than 300 years, and whose family, they add, continued more than 100 generations during the space of 12 or 18,000 years: here is what we find recorded.

Hane-tsee says, that, in the first ages of the world, animals multiplied very fast, and that men being but few, they could not subdue the beasts and serpents.

Yene-tsee † says also, that the ancients, either perched on trees, or stretched in hollow caves, possessed the universe (Tienc-hia, that is to say, China). These good kings (continues he) breathed nothing but charity without any shadow of hatred. They gave much, and took nothing. The people did not go to pay their court to them, but all the world submitted to their virtues.

Lopi and Ouai-ki say almost in the same words, that, in the most remote antiquity, men sheltered themselves in the hollows of rocks, that they dwelt in deserts, and lived in society with all the other creatures. They had no thought of doing any injury to the beasts, and the beasts did not think of hurting them. But in the succeeding ages they became too wise, which made the animals rebel; armed with claws, teeth, horns, and venom, they assaulted man, and man was not able to resist them. Yeou-tsao reigned then. He was the first who built houses of wood, in the form of birds nests; he persuaded men to retire into them to avoid the wild beasts. They did not know as yet how to cultivate

† Yene-tsee was minister of state under three kings of Tsi, he was cotemporary with Kouane-tse.

the earth, they lived on herbs and fruits. They drank the blood of animals, they devoured their flesh quite raw, they swallowed the hair and the feathers. This is what they say of Yeou-tiao-chi: after him comes Soui-gine, founder of the 12th dynasty.

Soui-gine-chi is esteemed the inventor of fire.

On the summit of the mountain Pou-tcheou, says an author, are to be seen the walls of Justice. The sun and the moon cannot approach them; there is no difference of seasons there, nor vicissitudes of days and nights. This is the kingdom of light on the confines of Si-ouang-mou^a. A saint (a great man) went to make a tour beyond the bounds of the sun and moon: he beheld a tree, and upon that tree a bird, who made fire come out of it by picking it. He was surprised at this; he took a branch of this tree, and from thence struck fire; from whence they called this great personage *Soui-gine*.

Other authors say also, that Soui-gine made fire with a certain kind of wood, and taught men to dress their victuals. By this means all diseases, and all disorders of the stomach and bowels were prevented. In this he followed the direction of heaven, and from thence was named *Soui-gine*.

They say further, that, in the days of Soui-gine, there was much water upon the earth, and that this prince taught men the art of fishing. He must, of consequence, have invented nets or lines, which invention is after this ascribed to Fou hi.

One Long-ma, or Dragon-horse, brought him a kind of table, and the tortoise letters. Soui-gine is the first to whom they apply this event, but the same thing will be said in the sequel of several others.

Soui-gine was the first who gave names to plants and animals; and these names (say they) were so expressive, that the nature of every thing was known by its name. He invent-

^a Si-ouang-mou signifies literally *the mother of the king of the west*. This is the name of a kingdom which the Chinese place in the west of Ta thsine, of the lake called *Weak Water*, and of the desert named the *running sands*. If *Weak water* is the Dead sea, *Si-ouang-mou* may be Egypt.

ed weights and measures for the regulation of commerce, which had been unknown before him.

Anciently (says an author) men married at fifty, and women at thirty years of age: Soui-gine shortened this period, and appointed that young men should marry at thirty, and girls at twenty.

Lastly, the Liki says, that it was Soui-gine who first taught men urbanity and politeness.

It now remains to speak of Yong-tching-chi, the founder of the thirteenth and last dynasty of this period.

In his time, they used slender cords on which they tied various knots, and this served them instead of writing ^b. But, after the invention of letters, how could they return again to the use of these cords, which is so limited and imperfect? This, as you perceive, implies a contradiction.

I come now to the ninth Ki or period, named *Chene-tong*. This ninth period will bring us down to the times of Fou-hi. It comprehends twenty-one kings, whose names are as follow :

- | | |
|----------------------------|---------------------|
| 1. Sse-hoang or Tfang-hie. | 12. Hiene-yuene. |
| 2. Pe-hoang-chi. | 13. He-fou. |
| 3. Tchong-hoang-chi. | 14. Kai-tiene. |
| 4. Tai-ting-chi. | 15. Tfone-liu-chi. |
| 5. Kouene-liene. | 16. Tcho-jong. |
| 6. Yene-chi. | 17. Hao-yng. |
| 7. Tai-chi. | 18. Yeou-tsao-chi. |
| 8. Tching-hoei-chi. | 19. Tchu-siang-chi. |
| 9. Li-lou or Hoei-chi. | 20. Yne-khang-chi. |
| 10. Sohoang-chi. | 21. Vou-hoai-chi. |
| 11. Nuei-touane-chi. | |

Liu-pou-ouei says plainly, that Sse-hoang made letters. This Sse-hoang is called also *Tfang-hie*. Some historians place him under Hoang-ti, whose minister they make him; while others make him a sovereign prince, and much anterior to Hoang-ti, as you see: but I shall leave to the Chinese to settle this point.

^b The Peruvians used this kind of writing before the Spaniards conquered their country.

The first inventor of letters was T'iang-hie, then the king Vou-hoai made them be ingraven on the coin, and Fou-hi used them in the public acts for the government of the empire. But observe that these three emperors were even before Chini-nong; how can it be said then that letters were not invented till under Hoang-ti? Such is the reasoning of Lopi, who was quite confounded with these fabulous times.

To this criticism it may be answered, You have told us that letters had been invented in the reign of Soui-gine, the 12th king of the eighth period; how then can you pretend to give the honour of this invention to T'iang-hie, who, according to your own testimony, did not flourish till the ninth period? However this may be, Ssee-hoang (say some romancers) knew to form letters the moment he was born. He was endowed with great wisdom, &c. After he had received the Ho-tou*, he visited the south, went upon Mount Yang-yu, and stopped on the bank of the river Lo. A divine tortoise carrying blue letters upon his shell, delivered them to him: then Ssee-hoang penetrated all the changes of heaven and earth; above he observed the various configurations of the stars; below he examined all the marks he had seen upon the tortoise; he viewed the plumage of birds, he took notice of the mountains, and of the rivers which flow from them, and of all this he composed letters. Some very learned Chinese think, that this was the ancient kind of writing named *Ko-teou-chu*, which continued (they say) to the reign of the Emperor Suene-ouang, that is, to the year 827 before J. C.

But Cong-yng-ta very well observes, that though the external figures of the letters have changed several times in some things, the six rules on which T'iang-hie formed them, have never suffered any change †.

Then

* The Ho-tou is a kind of table, on which are drawn various strokes or lines, in which, at certain distances, are little black and white circles.

† In general, I think, contrary to the opinion of M. Freret, that the Chi-

Then (continues Lopi) there was a difference between the sovereign and the subject, relation between the father and the son, distinction between the precious and the vile; laws appeared, rites and music reigned. Punishments were inflicted with vigour. Thus Sfee-hoang laid the foundations of good government, he appointed officers for each affair, the smallest did not escape him; and thus heaven and earth arrived at their full perfection.

They say nothing of the successor of Sfee-hoang which has any relation to our subject; but they say, that, under the reign of Tchong-hoang-chi the third king of this period, they still used slender cords for writing.

From this prince we come at once to Hiene-yuene the 12th in order of this period, because nothing is said of his predecessors.

We find a great many things under the reign of this prince, because he is the same with Hoang-ti, or at least they have confounded these two princes together.

They ascribe to Hiene-yuene the invention of cars. He joined two pieces of wood together, the one placed upright, and the other across, to the honour of the Most High*. It is from this he is called *Hiene-yuene*. The piece of wood placed across is called *hiene*, and that which is placed upright is called *yuene*. Hiene-yuene struck copper money, and made use of the balance to determine the

these characters were significant representations of objects. The six rules mentioned in this passage, afford a proof of this; and besides, this is the most simple and most natural idea that could occur to men; in a word, the Chinese characters and the Egyptian hieroglyphics are the same as to their formation. We know that the sacred writing used by the hierogrammatists or sacred writers of the Egyptians, was subdivided into *Κυριολογικη* and *Συμβολικη*, that is to say, into characters representative of objects, and allegorical characters, to which we may refer the six rules of the Chinese here mentioned. In like manner again, as the Chinese say of the inventors of writing, that they viewed the heavens to obtain models of this writing, so likewise Sanchoniatho says of Thaaud or Mercury, that he imitated heaven in forming the sacred characters. Apud. Euseb. præp. evang. l. i. c. 10.

* The religious monuments of the Greeks were originally constructed in this manner. See Plut. t. 2. p. 478. A.

weight

weight of things. By this means he ruled the world in peace. *Ho* signifies merchandise in general. Formerly they wrote simply *boa*, which signifies exchange. These merchandises (they say) consisted in metal, *kine*, in precious stones, *yu*, in ivory, *tchi*, in skins, *pi*, in coined money, *tsuene*, and in stuffs, *pou*, &c.

They then denominated money (as is done still) by the name of the reigning family. That of Hiene-yuene was one inch seven lines, and weighed twelve *tchu*, [the *tchu* is the 20th part of a *yo*, and a *yo* weighs 1200 little grains of millet]. They then ingraved letters on their money (as is still done at present). It is for this reason that *ventsee*, letters, signifies also a piece of money, which is called likewise *kini*, and *tsuene*, and *tao*.

Tcho-jong (16th emperor of the 9th period) hearing at Cane-tcheou the singing of birds, composed a music of union whose harmony penetrated every where, touched the intelligent spirit, and calmed the heart of man, in such a manner that the external senses were sound, the humours in equilibrio, and the life very long. He called this music *Tsie-ouene*, that is to say, temperance, grace, and beauty ^f.

But the design, and in some sort the only aim of the ancient music of the Chinese, according to their authors, was the harmony of the virtues, the moderation of the passions, elegance of manners, and, in a word, every thing that can contribute to the perfection of a good and wise government, &c. For they were persuaded that music was capable of working all these miracles. It is difficult for us to believe them in this, especially when we consider the music which is at present used amongst them. But I appeal to the Greeks, who related as astonishing effects ;

^f It is thus Lucretius says, that music was modelled after the singing of birds.

*Ut liquidas avium voces imitaret ore
An e fuit multo, quam lenia carmina cantu
Coacti, brave homines possint, auresque juvare.*

from this agreeable invention, whilst the modern Greeks, like most part of the Orientals, have no music but a wretched and contemptible monotony. Besides, we shall have occasion elsewhere to treat of music a little more at large.

The 17th king of the 9th period is named Hao-yng. In his time they cut down the branches of trees to kill beasts with. Men were few. Nothing but vast forests were every where to be seen, and these frightful woods were filled with wild beasts. How contradictory is this, and how incompatible with the times in which this prince is said to have reigned !

The 18th king of the 9th period is called *Yeou-tsao-chi*. We have seen in the preceding period, a prince of the same name. The Ouai-ki places this king at the beginning of the last ki, and gives him for successor Soui-gine. At this rate nine entire periods, or ki, must have elapsed before men knew how to build huts, or had the use of fire. Lopi follows another method : he has ranged *Yeou-tsao-chi* and *Soui-gine* in the preceding period ; and although the king we are now speaking of bears the same name, he speaks of him quite differently.

The 19th king of the 9th period is named *Tchu-siang-chi*.

They say that he commanded Sfee-kouei to make a kind of guitar with five strings named *se*, to remedy the disorders of the universe, and preserve every thing that had life.

The 20th king of the 9th period is named *Yne-khang-chi*.

In his time, the waters did not flow, the rivers did not pursue their usual course, which occasioned a great number of diseases.

Yne-khang instituted the dances called *Ta-vou* (grand dances), with a view to preserve health : for, as Lopi says, when the body is not in motion, the humours have not a free course ; matter is amassed in some part, from whence come diseases, which all proceed from some obstruction.

The

The Chinese also imagine, that a man's virtues may be known by his manner of touching the lute and drawing the bow, &c.

Thus the Chinese make dances as well as music have a reference to good government; and the Liki say, that we may judge of a reign by the dances which are used in it.

The 21st and last king of the 9th period is named *Vou-boai-chi*; but they relate nothing of this prince which is worthy of notice.

This is all that the fabulous times contain. If these times cannot enable us to fix the real epocha of various inventions, (as the Chinese are so full of contradictions about the time of these different discoveries), we see at least from them, that the origin of arts has been much the same among them as among other nations. We are now come down to Fou-hi, who is considered by the Chinese historians as the founder of their monarchy. What they say of this prince and his successors, has some more solidity in it than what we have hitherto seen.

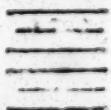
F O U - H I.

The Ouzi-ki quoted in the Chinese annals, thus describes the manners of mankind in these days. “ In the
“ beginning, men differed nothing from other animals in
“ their way of life. As they wandered up and down in the
“ woods, and women were in common, it happened that
“ children never knew their fathers, but only their mothers.
“ They abandoned themselves to lust without shame, and
“ had not the least idea of the laws of decency. They
“ thought of nothing but sleeping and snoring, and then
“ getting up and yawning. When hunger pressed them,
“ they sought for something to eat; and when they were
“ gluttoned, they threw the rest away. They eat the very
“ feathers and hair of animals, and drunk their blood.
“ They clothed themselves with skins quite hairy. The
“ Emperor

“ Emperor Fou-hi began by teaching them to make lines
 “ for catching fish, and snares for taking birds. It was
 “ for this, that this prince was named *Fou-hi-chi*. He
 “ taught them further to feed domestic animals, and to
 “ fatten them for slaughter; for which they gave him the
 “ surname of *Pao-hi-chi*.”

It seems evident, that the ancient Chinese had at first no other habitation than caves, the hollows of rocks and natural dens. They were then infested with a kind of insect or reptile called *iang*; and when they met, they asked one another, Are you troubled with *iangs*? To this day they make use of this expression, in asking after any person's health: *Couei-iang*? What disease have you? How do you do? *Vou-iang*, I am without *iang*; that is to say, I am hearty, in perfect health, without any ailment.

It would be superfluous to relate here, what the Chinese say, in their annals, of the invention of characters, and of *coua*, after what has been said by F. Couplet and so many others on that subject. I shall only add, that the treatise *Hi-tsee*^s bears, that, at the beginning, nations were governed by means of certain knots which they made on slender cords: that afterwards the saint introduced writing in their place, to assist the mandarins in performing all their offices, and the people in examining their conduct; and that it was by the symbol  Kouai, that he conducted himself in the execution of his work.

Lopi, whom we have so often quoted already, says, that Fou-hi extracted from the symbol of six lines every thing that concerned good government. For example, 
 Li gave him the hint of making lines for hunting and fishing, and these lines were a new occasion of inventing stuffs for garments. Lopi adds, that it is a mistake to

^s This is the treatise in question. Confucius is the author of it, it is a commentary on the Y-king. They call this commentary, out of respect to its author, *Ta-tchouens*, the great tradition. I should be wrote *Hi-tsee*, and not *Y-tsee*.

imagine,

imagine, that, in the times of Fou-hi, they still used cords tied and knotted, and that books were not introduced till under Hoang-ti.

Fou-hi taught men to rear the six domestic animalsⁱ, not only for food, but also for victims, in the sacrifices which they offered to *Chine*, and to *Ki*^k. They pretend that Fou-hi regulated the rites *Kiao-chene*.

Fou-hi also instituted marriage; before this the intercourse of the sexes was indiscriminate: he settled the ceremonies with which marriages were to be contracted, in order to render this great foundation of society respectable. He commanded the women to wear a different dress from that of the men, and prohibited a man's marrying a woman of the same name, whether a relation or not, a law which is actually still in force.

Fou-hi appointed several ministers and officers to assist him in the government of the empire.

One of these officers made the letters, another drew up the calendar, a third built the houses, a fourth practised medicine, a fifth cultivated the ground, a sixth was the master of the woods and waters.

They pretend that Fou-hi applied himself very much to astronomy. The Tcheou-pi-touane says, that he divided the heavens into degrees. Lopi takes notice, that properly the heavens have no degrees, but that this term is used with relation to the path of the sun in the course of a year.

The period of sixty years is reckoned due to Fou-hi. The Tsiene-piene says plainly, that this prince made a calendar to fix the year, and that he is the author of *Kia-tse*. The Sane-fene says the same thing; and the Hane-li-tchi says, that Fou-hi made the first calendar by the *Kia-tse*; but the Chi-pene ascribes this to Hoang-ti. This is one of these contradictions so common in the Chinese historians.

The same Fou-hi, they say, made arms and ordained

ⁱ The six domestic animals, according to the Chinese, are the horse, the ox, the hen, the hog, the dog, and the sheep.

^k *Chine*, the spirit of heaven, and *Ki*, the spirit of the earth.

punishments. These arms were of wood, those of Chin-nong were of stone, and Tchi-yeou made some of metal.

Fou-hi drained off the waters, and surrounded the cities with walls. In the mean time, as Chin-nong is esteemed the first who made walls of stone, we must suppose, that those raised by Fou-hi were only of earth or brick.

Fou-hi gave rules to music. Those who ascribe this fine art to Hoang-ti are deceived (or *vice versa*.) After Fou-hi had invented fishing, he made a song for the fishers. It was from his example that Chin-nong made one for the labourers.

Fou-hi took of the wood of Tong; he made it hollow; and of it made a *kine* (a lyre, or what you please to translate it) seven feet two inches long; the strings were of silk, to the number of 27; he commanded this instrument to be named *Li*. Others say it had but 25 strings, others 10, and others only 5; (which of them shall we believe?) Besides, others make this instrument only three feet six inches six lines in length.

Fou-hi made this instrument, say some, to ward off incantments, and banish impurity of heart.

He took of the wood of *sang*, and made also a guitar of 36, or rather of 50 strings. This instrument served to adorn the person with virtues, and to regulate the heart, &c. Lastly, he made a third instrument of baked earth; after which, say they, ceremonies and music were in high esteem.

The money which Fou-hi introduced, was of copper, round within to imitate heaven, and square without to resemble the earth¹.

He himself made trial of many medicinal plants. (This

¹ The Chinese represent the earth square. This ignorance of the figure of our globe has nothing in it surprising, when we consider how little progress astronomy has made in China. I regard further this error, perpetuated among the Chinese vulgar, as arising from hence, that they give these denominations to the Chinese empire, which belong only to the whole globe. Such, for example, is the expression *Thiene-hia*, word for word, *inferior heaven*, or *that which is under heaven*, a name by which they commonly distinguish that empire in their books. Now, under the Emperors Yao, Chune, and Yu, they made several divisions of that empire, and one among others, by which they represented it perfectly square, in order to determine, by this means, the quantity and quality of its revenues. The Chinese knew no better.

is most commonly said of Chin-nong: but it is pretended, that Chin-nong finished what Fou-hi had begun.)

This is all we read of Fou-hi. You will remark several contradictions in most of these traditions, especially when you come to see in the sequel, that almost all these inventions are ascribed to the successors of Fou-hi. I leave it to your penetration and critical skill, to judge what regard is due to the beginnings of the Chinese history.

I have still some reigns to examine, before I have done with the fabulous and uncertain times.

They say of Koung-koung, that he employed iron in making hangers and hatchets.

They ascribe to Niu-oua (who is the Eve of the Chinese) several instruments of music. The instruments *seng* and *hoang* served her, say they, to communicate with the eight winds. By means of *kouene*, or double flutes, she united all sounds into one, and made concord between the sun, moon, and stars. This is called *perfect harmony*. Niu-oua had a guitar (*se*) of five strings; she made another of 50 strings, whose sound was so affecting, that it could not be borne; wherefore she reduced these 50 strings to 25, to diminish its force.

The Emperor Chin-nong is very famous among the Chinese, by the great discoveries which, they say, he made in medicine, agriculture, and even in the military art, since they believe, that, in the times of *Han*, they had a book of this prince on the military art.

A fondness for the marvellous has made some say, that, at three years of age, he knew every thing that concerned agriculture. The very name *Chin-nong*, in the Chinese language, signifies, *the spirit of husbandry*. Chin-nong took very hard wood, of which he made the coulter of the plough, and softer wood of which he made the handle. He taught men to cultivate the earth. They ascribe to him the invention of wine. He sowed the five kinds of grains on the south of Mount Ki, and taught the people to make them their food.

Chin-nong commanded that they should be diligent in
R r 2 gathering

gathering the fruits which the earth produced. He taught every thing relative to hemp, to the mulberry-tree, and the art of making cloth and stuffs of silk. They owe also to Chin-nong the potters and the founders art; others, however, ascribe pottery to Hoang-ti, and the art of melting metals to Tchi-yeou.

Chin-nong invented fairs in the middle of the day. This was the origin of commerce and mutual exchanges. He made use of money to facilitate trade. He instituted festivals.

Chin-nong distinguished plants, determined their various properties, and applied them skilfully in the cure of diseases. They say, that, in one day, he made trial of 70 kinds of poisons, spoke of 400 diseases, and taught 365 remedies. This makes the subject of a book, intitled, *Pouene-tsao*, which they ascribe to him, and which contains four chapters. Others alledge, and with reason, that this book is not ancient. They say, with as little truth, that Chin-nong made books ingraved on square plates.

Chin-nong cammanded Tsiou-ho-ki to commit to writing every thing relative to the colour of sick persons, and what concerned the pulse, to teach how to examine its motions if they were regular and harmonious, and for this end, how to feel it from time to time, and acquaint the patient.

Chin-nong composed ballads or songs on the fertility of the country. He made a very beautiful lyre, and a guitar adorned with precious stones, to form the grand harmony, to bridle concupiscence, to elevate virtue to the intelligent spirit, and bring men back to the celestial verity.

Chin-nong ascended a car drawn by five dragons. He was the first that measured the figure of the earth, and determined the four seas. He found 900,000 lys is west, and 850,000 is north and south. He divided all this vast space into kingdoms *.

* Under these exaggerated measures they speak of China. This is evident from the four cardinal points which they give this empire, as Kiao to the south, Yeou to the north, Yang-cou to the east, and San-ouei to the west; for these were, in the times of Yao and Chune, the limits and extremities of China.

Among the successors of Chin-nong they place Hoang-ti, and the rebel Tchi-yeou, whom they make the inventor of arms of iron, and several kinds of punishments. Tchi-yeou had the power of raising mists and darkness extremely thick. Hoang-ti knew not how to attack and overcome him. He accomplished it however, by forming a car, on which he placed a figure whose arm of itself always turned to the south, in order to point out the four regions*. Hoang-ti used the lance and buckler.

Tchi-yeou ordered sabres, lances, and cross-bows to be made. They ascribe to Hoang-ti the *kia-tse*, or cycle of 60 years, or at least Ta-nao made it by his direction.

The Mandarin Tfang-kiai was charged to compose history. Yong-tcheng made a sphere which represented the celestial orbs, and discovered the polar star.

Li-cheou regulated numbers, and invented an instrument for computation, like to, or the same with that which is still in use in China and India; and of which Martini, in his Decades, and la Loubere, in his voyage to Siam, have given us the design and description.

Ling-lune, a native of Yuene-yu in the west of Ta-hia, (that is, Khorassan), took reeds in the valley of Hiai-ki; he cut two of an equal length, and blew into them: this gave occasion to the invention of bells. He adjusted twelve of these reeds to imitate the song of fong-hoang, the royal bird, (one of the fabulous birds of the Chinese). He divided these reeds into twelve *lu*; six served to imitate the song of the male, and six that of the female. Finally, this man brought music to perfection, and explained the order and arrangement of different sounds. By means of these *lu-lu*, he governed the *Khi* of the Yne and of Yang, he determined the change of the four seasons, and gave calculations for astronomy, geometry, and arithmetic.

Yong-yuene, by order of Hoang-ti, made twelve bells

* Some modern authors fancy they perceive in this the invention of the compass.

of copper, which corresponded to the moons, and served to adjust the five tones, and fix the seasons, &c. fables.

Hoang-ti invented a kind of diadem or tiara, called *Miene*. He ordered a blue and yellow robe to be made for himself, in imitation of the colours of heaven and earth. Having viewed the bird *hoei*, and considered the variety of its colours, as well as those of the flowers, he made garments be dyed of different colours, to make a distinction between the great and small, the rich and poor.

Nin-fong and Tche-tsiang invented mortars for pounding rice; kettles or caldrons: they invented the art of building bridges, and of making shoes; they made coffins for the dead; and men reaped great advantages from all these inventions. Hoëi invented the bow, Y-meou arrows; Khy-pe invented the drum, which made a noise like thunder, trumpets, and horns, which imitated the voice of the dragon.

Kong-kou and Hoa-hu, by order of the Emperor Hoang-ti, hollowed a tree of which they made a ship; of the branches of the same tree they made oars; and by this means they were able to penetrate into places which seemed inaccessible, and where men had never been.

For the transportation of merchandise by land, they also invented chariots under this reign, and trained oxen and horses to draw them.

Hoang-ti also turned his thoughts to buildings, and gave models of them. He built a temple, called *Ho-kong*, in which he sacrificed to *Chang-ti*, or to the Supreme Being.

With a view to facilitate commerce, Hoang-ti struck money, called *kine-tao*, *knife of metal*, because it had the shape of the blade of a knife.

Hoang-ti having observed that men died before the time fixed by nature, of diseases which carried them off, he commanded Yu-fou, Ki-pe, and Lei-kong, three famous physicians of these times, to assist him to determine what remedies were proper for each disease.

Si-ling-chi,

Si-ling-chi, the chief consort of that emperor, contributed on her part to the good of the state, and taught the people the art of rearing silk-worms, of spinning their cods, and making stuffs of them.

The Ouai-ki, from whence I take almost all this, takes notice, that Hoang-ti commanded China to be measured, and divided it into provinces or tcheou. Each *tcheou* was composed of ten *che*, each *che* was composed of ten *tou*, and each *tou* contained ten *ye*, or ten cities. These ten *ye*, or cities, had each five *ly*, or streets, &c.

The empire of Hoang-ti, which, according to this historian, seems to have been considerable, extended on the east to the sea, on the west to Khong-tong. It was bounded on the south by Kiang, and on the north by the country of Hoene-jo.

They say nothing which has any relation to the arts under the three princes who follow Hoang-ti; that is to say, under the reigns of Chao-hao, who reigned 84 years; of Tchouene-hio, who reigned 78 years; and of Cao-sine, who reigned 70 years. They observe only, that Chao-hao made them beat the watches with a drum: this supposes that they had then some instrument for marking the hours. The Se-ki adds, that this emperor levelled the highways, in order to render the mountains accessible, and that he cleared the channels of rivers. He made also a new kind of music, called *Ta-yuene*, to unite men and genii, and reconcile high and low.

Father Gaubil, and other learned men, have said enough of the astronomical knowledge of the Emperor Tchouene-hio, and of the changes which he made in the manner of observing the celestial motions, by inventing a machine which served for equations, ascensions, &c. I shall therefore content myself with referring you to their works, in which you will see what the Chinese think, both of this ancient astronomy, and of the pretended conjunction of the five planets in the constellation *Che*, which happened, as they say, under this prince.

After

After having overcome the fatigue of so many fabulous traditions, I am now arrived at the historical times. But before we enter upon them, it will not be improper to make some reflections which are absolutely necessary to shew how little regard is due to this sort of traditions. I think these reflections so much the more important, as they will help to undeceive a great many people of the mistake they are in about the Chinese antiquities.

The Chinese monarchy begun by three princes, distinguished by the title of *Sane-hoang*, that is to say, the *three Augusti*. These three Augusti, according to the most generally received opinion, are *Fou-hi*, *Chine-nong*, and *Hoang-ti*. The five emperors, successors of the *Sane-hoang*, are distinguished by the title of *Ou-ti*, that is to say, the *five emperors*. The five emperors are, *Chao-hao*, *Tchouene-hio*, *Tico*, *Yao*, and *Chune*. This division has been followed by *Cong-ngane-coue*, the great-grandson of Confucius, in the eighth generation, and one of the most celebrated writers of the dynasty of Hane. It has been adopted also by *Hoang-fou-mi*, and by most part of the best writers. The proofs of this opinion are taken partly from the book *Tcheou-li*, an ancient record, or state of the empire, which many ascribe to the famous *Tcheou-cong*, minister and brother of *Vou-vang*, who was the founder of the imperial dynasty of *Tcheou*, eleven hundred and some odd years before the Christian æra; partly from the commentaries of *Tso-kieou-mine*, on the *Tchune-tsieou* of Confucius his master. In these works, mention is made of the books, *Sane-fene* and *Ou-tiene*, which, they say, are the histories of the three *Hoang*, and of the five *Ti*: now, the two first chapters of *Chou-king*, which contain an extract of the histories of *Yao* and of *Chune*, bore the title of *Tiene-yao* and *Tiene-Chune*; from whence it was concluded, that *Yao* and *Chune* were two of the five *Ti*; consequently *Fou-hi*, *Chin-nong*, and *Hoang-ti*, were what are called the three *Hoang*; and *Chao-hao*, *Tchouene-hio*, *Tico*, *Yao*, and *Chune*, were the five *Ti*.

You will no doubt think these but feeble proofs to support an historical fact of this kind ; but those who are of a contrary opinion, bring nothing to induce us to believe them, rather than Cong-ngane-coue and Hoang-fou-mi.

Hou-chouang-hou, in a preface before the Tfiene-piène of Kine-gine-chanè, confesses that we find in the Tcheou-li, the existence of the book of three Hoang, and that of five Ti ; but he adds, that we do not find there the names of these eight monarchs ; that, under the Tfin, they spoke of Tiene-hoang, of Ti-hoang, and of Gine-hoang ; that Cong-ngane-coue, in his preface to Chou-king, gives Fou-hi, Chine-nong, Hoang-ti, for the three Hoang, and that he takes Chao-hao, Tchouene-hio, Tico, Yao, and Chune for the five Ti ; but that we know not on what foundation he does this, since Confucius, in the Kia-yu, distinguishes by the title of *Ti*, all the kings after Fou-hi. The same thing is proved by some passages of Tso-chi and of Liou-pou ouei ; from whence they conclude, that Fou-hi, Chine-nong, and Hoang-ti are not the three Hoang, and that there are no other Hoang but heaven, earth, and man.

Tchine-huene retrenches Hoang-ti from the number of the Sane-hoang, and puts in his place Niu-oua, whom he ranges between Fou-hi and Chine-nong. Others strike out Niu-oua, and put Tcho-yong in the place of Hoang-ti. Niu-oua was the sister of Fou hi, and Fou-hi, they say, reigned 115 years. At what age must this princess have mounted the throne, for they make her succeed her brother ?

The famous Sse-ma tsiene, to whom the Chinese, from their high esteem of him, have given the name of *Tai-sse-cong*, or *father of history*, will have Hoang-ti, Tchouene-hio, Cao sine, Yao, and Chune to be the five Ti ; and he gave these princes for their predecessors Soui-gine-chi, Fou-hi, and Chine-nong, who, according to him, were the three Hoang. This opinion, since his time, has been embraced by several other writers, who depended upon his authority more than upon proofs which he could not produce.

Confucius says in his *Kia-yu*, that the princes who had governed the empire, began at Fou-hi to take the name of *Ti* or Emperor. The same philosopher says further, in the treatise *Hi-tsee*, or commentary upon the *Y-king*, that anciently Fou-hi governed China, that *Chine-nong* succeeded him, that after them *Hoang-ti*, *Yao*, and *Chune* were seated on the throne. From so decisive a testimony, *Hou-ou-fong*, and several others with him, have not doubted, that these five princes named by Confucius, were the *Ou-ti*, or five emperors. As to the *Sane-hoang*, they admitted *Tiene-hoang-chi*, *Ti-hoang-chi*, *Gine-hoang-chi*, as three chiefs of the people who had governed the empire before Fou-hi.

As it is from *Tao-ffe*, that the several authors we have now quoted, have borrowed their idea of this chimerical division of the eight first Chinese emperors, into three *Hoang* and five *Ti*, it is necessary to relate what these religious think themselves. They have opinions peculiar to themselves about these first ages of the monarchy. They believe, that at the first there were three *Augusti*, *Sane-hoang*; then five emperors, *Ou-ti*; next three kings, *Sane-vang*; and lastly, five *Pa*, *Ou-pa*; that is to say, five chiefs of *Regulos*.

This order so regularly observed of three and then five, which is repeated twice, shews plainly, that all this has no foundation in truth, but that it is a system invented at pleasure. Wherefore *Ton-chong-chu*, who lived under the *Hane*, explained this in an allegorical manner. The three *Hoang* were, according to him, the three powers, (heaven, earth, and man); the five *Ti* were the five duties (the duties of king and subject, of father and children, of husband and wife, of elder and younger brothers, of friends); the three *Vang* were the three lights, (sun, moon, and stars); finally, the five *Pa* were the five mountains, four of which are situated at the four cardinal points of the empire, and the fifth at the centre. Thus, *Tong-tchong-chu* allegorized this pretended succession of kings. But *Lopi*, who relates this explanation, adds, it was not his own. This is a point of criticism

ticism of little importance to us; let them, if they please, ascribe it to some other than Tong-tchong-chu; we have still ground to say, that it came from some writer who lived in an age not far from that of Tong-tchong-chu. This is enough for our present purpose, since we see from hence the little regard they then paid to this division, which they considered as chimerical. It would be in vain to attempt to reconcile all these contradictions. All these imaginary reigns are in the manner of the Tao-ssé, who have darkened the origin of the Chinese monarchy by their fables and mythology. The ten Ki or periods are of their inventing; they give them between two and three millions of years duration. But before these ten periods, they place three dynasties, viz. the dynasty of Thiene-hoang-chi, that of Ti-hoang-chi, and finally, that of Gine-hoang-chi. If we attend to the signification of these names, they must be interpreted thus: the *Sovereign of heaven*, the *Sovereign of earth*, the *Sovereign of men*. We see from hence, that the allegorical explanation of Tong-tchong-chu, which made the three Hoang signify the three powers, that is, heaven, earth, and man, is not without probability.

These three Hoang succeeded to Pouane-cou, otherwise Hoene-tune, the chaos, the origin of the world, which several of the Tao-ssé take for the first man, or the first king who governed China.

The dynasty of Thiene-hoang-chi had thirteen kings, who reigned, say they, 18,000 years; then came the dynasty of Ti-hoang-chi, whose kings, to the number of eleven, make up a like duration of 18,000 years. Finally, to Ti-hoang-chi succeeded the Gine-hoang-chi, whose dynasty, composed of nine kings, furnishes a space of 45,600 years. These three sums added, give us precisely 81,600 years. But if we add to these three dynasties, those which are comprehended in each of the ten Ki, and which amount, according to some calculations, to more than 230; we shall find, that the pretensions of the Chinese very much exceed those of the Chaldeans and Egyptians. For if we believe the calculations of various authors, from Pouane-cou to the

death of Confucius, which happened in the year 479 before J. C. there is elapsed 276,000 years, or 2,276,000, or 2,759,860, or even 3,276,000, or finally, which is a great deal more, 96,961,740 years: for we find all these different calculations.

It is visible enough, that these extravagant numbers can be nothing else but astronomical periods, contrived to give the conjunction of the planets in certain constellations, or calculations which have some relation to the ideas of the Tao-ssé, concerning the perpetual destructions and reproductions of worlds. In fact, some have endeavoured to make these numbers agree with the period of Tchao-cang-tsie, a famous philosopher in the days of Song, who had undertaken to determine the period of the duration of the world; for the system of the destruction and reproduction of worlds was very current, not only in the sect of Ju or of the learned, but also among the Bonzes, Ho-chang or the religious of Fo, and among the Tao-ssé or followers of Lao-kiune, that is to say, among the three great sects, who have the most influence in the empire. Tchao-cang-tsie established then a great period of 129,000 years, called *Yuene*, composed of twelve equal parts, called *baei* or *conjunctions*, which were each of 10,800 years. In the first conjunction, said he, heaven was formed by little and little, by the motion which the Tai-ki or the Supreme Being impressed upon matter which was formerly at perfect rest. During the second conjunction, the earth was produced in the same manner. At the middle of the third conjunction, man and all other beings began to spring up, in the manner that plants and trees are produced in the islands, which afterwards preserve their several kinds by their seeds. At the middle of the eleventh conjunction, all things shall be destroyed, and the world shall fall back again into its primitive chaos, from whence it shall not arise till after the twelfth conjunction is expired.

It is not difficult at present to conceive, that the Tao-ssé had invented that prodigious number of reigns before Fou-hi, for no other reason, but to fill up that interval, which, according

according to them, had elapsed from the production of man, to the beginning of the Chinese monarchy, that is to say, to the reign of Fou-hi. The same calculator determined the half of Yuene, or of his great period of 129,000 years, at the reign of Yao.

These Tao-ssé, as I have said already, laid down these ten ages or ten Ki as an indisputable principle; each Ki comprehended several dynasties, whose duration they determined as they thought fit, and as their calculation required: but if they were at liberty to increase or diminish the duration of the ten Ki, it was not the same as to their number, which was in some sort a fundamental principle of their sect, from which they were not allowed to depart.

Some missionaries to whom this doctrine of Tao-ssé was not unknown, imagined, that they discerned in these ten Ki, the ten generations before Noah; and as the writers cited by Lopi, and by Cong-ing-ta, say, that of these ten Ki, six were before Fou-hi, and four after him; these same missionaries have imagined, that Fou-hi was Enoch. It must be owned, in the mean time, that Tchine-huene and several others do not observe the same order; that they place Chine-nong in the ninth Ki, Hoang-ti in the tenth, &c. By this computation Hoang-ti would be Noah, and Fou-hi Methuselah, which contradicts their hypothesis.

The opinion which considers the ten Ki of the Chinese as the ten generations which preceded Noah, is very ingenious, and not improbable. Towards the end of the reign of Tcheou, about 300 years before the Christian æra, some Jews travelled into China, who might have made the writings of Moses known there, and, of consequence, the ten generations which preceded the deluge: besides, this knowledge was common to the Chaldeans, who might have penetrated into China before the Jews.

T A B L E

TABLE of the Names of the AUTHORS
cited in this Work.

A.

- A** Bydenus *apud* Syncellum, in *fol. Paris. 1652.*
 Achilles Tatius, ad Arati phænom. *apud* Petav. in
 Uranologio, in *fol. Paris. 1630.*
 Acoſta, hiſtoire naturelle des Indes Occidentales, in 8°. *Paris, 1598*
 Acta eruditorum Lipſiæ, in 4°. 1682, & ann. ſeqq.
 Æliani, varia hiſtoria, in 4°. *Lugduni Batavorum, 1731.*
 Ælianus, de natura animalium, in 4°. *Londini, 1744.*
 Æſchyles, in *fol. Lond. 1663.*
 Æſchynes. See Demotheſis opera.
 Agatarchides *apud* Photium.
 Agricolæ opera, in *fol. Baſileæ, 1546.*
 Agrippæ opera, in 8°. *Lugduni, apud Beringos fratres.*
 Albertus Magnus, in 12°. *Amſtelodami, 1660.*
 Alexander Polyhiſtor, *apud* Syncellum.
 Alonſo Barba, de l'art de tirer les métaux, in 12°. *Paris, 1751.*
 Ammianus Marcellinus, in *fol. Paris, 1681.*
 Anciennes relations des Indes & de la Chine, in 8°. *Paris, 1718.*
 Anſon (Voyage d') in 4°. *Amſterdam, 1749.*
 Anthologia, in 4°. *Parifiis, 1566.*
 Apollodorus, in 12°. *Paris. 1599.*
 Apollodorus, *inter* hiſt. poet. ſcript. *I have made uſe of both theſe editions.*
 Apollonius Rhodius Argonauticorum, &c. in 8°. *Lugd. Batavorum, 1641.*
 Apuleii opera, *Parifiis, 1601.*
 Arati phænomena, in 4°. *Paris. 1559.*
 Ariſtidis opera, in 4°. *Oxonix, 1722.*
 Ariſtobulus *apud* Strabonem, Joſephum, & Photium.
 Ariſtophanes,

Aristophanes, in fol. *Amstelodami*, 1710.

Aristoteles, in fol. *Parisi. typis regiis*, 1629.

Arrianus, in 8°. *Amstelodami*, 1668.

L'art de convertir le fer en acier, par M. de Reaumur, in 4°. *Paris*, 1722.

L'Asia Di Barros, in 4°. in *Venetia*, 1562.

Athenæus, Deipnosophist. in fol. *Lugduni*, 1612.

S. Augustinus, de civitate Dei, cum commentario Ludov. Vives, in 8°. *Lugduni*, 1570.

Aurelius Victor, inter historiæ Augustæ scriptores.

B.

B Annier, explication des fables, in 12°. *Paris*, 1748.

S. Basilii Magni opera, in fol. *Parisi*. 1721, &c. &c.

Berosus, apud Syncellum & Josephum.

Bianchini, la istoria universale, in 4°. in *Roma*, 1747.

Bible de M. le Gros, in 12°. *Cologne*, 1739.

Bible du P. Calmet, in 4°. *Paris*, 1715.

Biblia Sacra, Hebraica, Græca, & Latina, in fol. *Parisi. ex officina Commeliniana*, 1616.

Biblia Sacra, cum univers. Franc. Vatabli & varior. interpret. annotationib. in fol. *Parisiis, sumptibus societatis*, 1729.

Bibliothèque ancienne & moderne, par J. le Clerc, in 12°. *Amsterdam*, 1714.

Bibliothèque choisie, par J. le Clerc, in 12°. *Amsterdam*, 1712.

Bibliothèque raisonnée, in 12°. *Amsterd.* 1728. &c. &c.

Bibliothèque universelle & historique, par J. le Clerc, in 12°. *Amsterd.* 1700.

Bocharti, geographiæ sacræ pars prior, Phaleg. in fol. *Cadomi*, 1646.

Bocharti, geographiæ sacræ pars altera, Chanaan, in fol. *Cadomi*, 1746.

Bocharti Hierozoicon, in fol. *Londini*, 1663.

Boetii de Boot, gemmarum & lapidum historia, in 8°. *Lugduni Batavorum*, 1647.

Borrichius, de ortu & progressu chemiæ, in 4°. *Hafniæ*, 1668.

Bouguer

- Bouguer (la figure de la terre; avec une relation abrégée d'un voyage au Pérou, par M.) in 4°. *Paris*, 1749.
 Braunius, de vestitu sacerdotum Hebræorum, in 4°. *Amstelodami*, 1701.
 Briffonius, de regio Pers. princip. in 8°. *Argent.* 1710.
 Brun (Corneille le) voyage au Levant, &c. in fol. *Paris*, 1714.
 Buffon, histoire naturelle, (par M. de), in 4°. *Paris*, imprimerie R. 1749. &c. &c.

C.

- CAsauboni, animadversiones in Athenæum, in fol. *Lugduni*, 1621.
 Cassiodori, opera omnia, in fol. *Rhotomagi*, 1679.
 Cæsar's (Jul.) comment. in 12°. *Londini*, 1736.
 Cedrenus, in fol. *Parisi. e typographia regia*, 1647.
 Celsus (A. Cornelius) de medicina, in 8°. *Roterod.* 1750.
 Celsus *apud* Origenem. See Origenes contra Cels. &c.
 Censorinus de die natali, in 8°. *Lugd. Batav.* 1743.
 Chambray (parallèle de l'architecture antique avec la moderne, par le Sieur de), in fol. *Paris*, 1650.
 Chardin, voyages en Perse & autres lieux, in 12°. *Amsterdam*, 1711.
 Chronicon Paschale, in fol. *Parisiis, e typographia regia*, 1688.
 Ciceronis opera omnia, in 4°. *Parisi.* 1740.
 Clementis Alexandrini, opera omnia, in fol. *Oxonii*, 1715.
 Clerc (D. le) histoire de la médecine, in 4°. *Amsterd.* 1702.
 Colonne, histoire naturelle de l'univers, in 12°. *Paris*, 1734.
 Columella *inter* scriptores rei rusticæ.
 Comte (le P. le) nouveaux mémoires sur l'état présent de la Chine, in 12°. *Paris*, 1697.
 Condamine, (relation de la rivière des Amazones, par M. de la), in 8°. *Paris*, 1745.
 Conon; *apud* Photium.
 Conquête du Mexique, in 12°. *Paris*, 1730.
 Conquête du Pérou, in 12°. *Paris*, 1742.

Conringius,

Conringius, de hermetica medicina, in 4°. *Helmestadii*, 1669.

Cornelius Nepos, in 12°. *Paris*. 1745.

Cragius in Gronovii thesauro antiquitatum Græcarum, in fol. *Lugduni Batavorum*, 1697.

S. Cyrilli Hierosolymitani archiep. opera omnia, in fol. *Oxonii*, 1703.

S. Cyrilli Alexandrini opera, in fol. *Paris*. 1638.

D.

Demosthenis & Æschinis opera, in fol. *Francofurti*, 1604.

Diarium Italicum a R. P. D. Bernardo de Montfaucon, in 4°. *Paris*. 1702.

Dicæarchus, apud scholiast. Apoll. Rhod.

Dictionnaire géographique de la Martiniere, in fol. *Paris*, 1739.

Diodori Siculi bibliotheca, in fol. *Amstelodami*, 1745.

Diogenes Laertius, in 4°. *Amstelodami*, 1698.

Dion. Cassii historia, in fol. *Hanoviæ*, 1606.

Dionysii Halicarnassei scripta omnia, in fol. *Francofurti*, 1586.

Dionysii Periegetæ orbis descriptio, inter geographiæ veteris scriptores Græcos minores, in 8°. *Oxonix*, 1712.

Dissertation du P. Souciet, sur les médailles Hébraïques, in 4°. *Paris*. 1717.

Draco Corcyræus apud Athenæum.

Duhamel, (M.) traité de la culture des terres, (par M.), in 12°. *Paris*, 1753, &c. &c.

E.

Eisenschmid, tractatus de ponderibus & mensuris veterum, in 12°. *Argentorati*, 1708.

Esprit des loix (l') in 12°. *Geneve*, chez Barillot & fils.

Essai sur les hieroglyphes des Egyptiens, in 12°. *Paris*, 1744.

Etymologicon magnum, in fol. e typograph. H. Commelini, 1594.

Euclidis opera, in fol. *Oxonix*, 1704.

Eudemus, apud Fabricium in *Bibliotheca Græca*.

Euripidis opera, in fol. *Cantabrigiæ*, 1694.

Eusebii præparatio evangelica, in fol. *Parisi*, 1628.

Eusebii thesaurus temporum, seu chronic. canon, in fol. *Amstelodami*, 1658.

Eustathius ad *Dionysium Periegetem*, inter geographiæ veteris scriptores Græcos minores, *Oxoniæ*, 1698.

Eustathii comment. in Homer. in fol. *Roma*, 1542. 1550.

Excerpta Polybii, Diodori, Nicol. Damasceni, &c. ab H. Valesio, in 4°. *Parisi*, 1634.

F.

Fabricii bibliotheca Græca, in 4°. *Hamburgi*, 1708.

Fabricii bibliotheca Latina, in 4°. *Venetiis*, 1728.

Fannius, de ponderibus & mensuris, in 8°. *Parisi*, 1565.

Feithii antiquitates Homericæ, in 8°. *Argentorati*, 1743.

Félibien, principes d'architecture, in 4°. *Parisi*, 1676.

Festus (Pomponius) de verborum significatione, in 4°. *Parisi*, 1681.

Fleury (l'Abbé de) mœurs des Israélites, in 12°. *Parisi*, 1754.

Fourmont, réflexions critiques sur les histoires des anciens peuples, in 4°. *Parisi*, 1735.

G.

Galenii opera, in fol. *Parisiis*, 1679.

Gassendi vita de Peiresc, in 4°. *Hagæ-Comitum*, 1654.

Gellius (Aulus), noctes Atticæ, in 4°. *Lugduni Batav.* 1706.

Gemelli Careri, giro del mondo, in 8°. in *Napoli*, 1699.

Gemini elementa astronomiæ, apud Patavium, in uranologio, in fol. *Parisi*, 1630.

Geographia Nubiensis, in 4°. *Parisi*, 1619.

Gesneri novus linguæ & eruditionis Romanæ thesaurus, in fol. *Lipsiæ*, 1749.

Gesneri historia animalium, avium, & piscium, in fol. *Frankfurti*, 1620.

Greaves (description des pyramides par J.) dans le recueil des voyages publiés par Melchisedec Thevenot, in fol. *Parisi*, 1696.

Guignes

Guignes (histoire générale des Huns par M. de), in 4°. *Paris*, 1756.

H.

Hardouin (le P.) commentaire sur l'histoire naturelle de *Pine*, in *fol. Paris*, 1723.

Ejusdem chronologia Veter. Testam. in *fol. inter opera selecta, Amstelodami*, 1710.

Heliodori *Æthiopica*, in 8°. *Lutzæ*, 1619.

Hellot, (M.) de la fonte de mines, in 4°. *Paris*, 1750.

Herbelot (d') bibliothèque Orientale, in *fol. Paris*, 1697.

Hermannus Hugo de prima scribendi origine, in 8°. *Trajecti ad Rhenum*, 1738.

Herodotus, in *fol. Francofurti*, 1608.

Hesiodus variorum, in 8°. *Amstelodami*, 1701.

Hesiodi opera omnia, cum Græcis scholiis, in 4°. *ex officina Plantiniana*, 1603.

Hesychii lexicon, &c. in 4°. *Lugduni Batavorum*, 1668.

S. Hieronymi opera, in *fol. Paris*, 1693-1708.

Hippocratis opera, in *fol. Paris*, 1679.

Histoire de Genghiscan, par Petis de la Croix, in 12°. *Paris*, 1710.

Histoire de Judith (la vérité de l') par le P. Montfaucon, in 12°. *Paris*, 1692.

Histoire de la Chine par le P. Martini, in 12°. *Paris*, 1692.

Histoire de la Chine par le P. Semedo, in 4°. *Lyon*, 1667.

Histoire de la jurisprudence Romaine, in *fol. Paris*, 1750.

Histoire de la médecine par Daniel le Clerc, in 4°. *Amsterdam*, 1702.

Histoire de la Nouvelle France, par le P. Charlevoix, in 12°. *Paris*, 1744.

Histoire de la vie & des ouvrages de la Croze, in 12°. *Amsterdam*, 1741.

Histoire de la Virginie, in 12°. *Amsterdam*, 1707.

Histoire de Languedoc, par D. Vaissette, in *fol. Paris*, 1730.

Histoire des Incas de Garcilasso de la Véga, traduite par J. Baudoin, in 8°. *Amsterdam*, 1715.

Histoire des Incas, nouvelle traduction, in 12°. *Paris*, 1744.
I have made use of both these editions.

Histoire des îles Mariannes par le P. le Gobien, in 12°. *Paris*, 1700.

Histoire du commerce, & de la navigation des anciens, in 12°. *Paris*, 1716.

Histoire du droit François, à la tête de l'institution au Droit François, par Argou, in 12°. *Paris*, 1739.

Histoire du Japon par Kæmpfer, in 12°. *La Haye*, 1732.

Histoire générale des îles Antilles par le P. du Tertre, in 4°. *Paris*, 1667. 1671.

Histoire générale des voyages, in 4°. *Paris*, 1746, &c. &c.

Histoire naturelle de l'Islande, in 12°. *Paris*, 1750.

Histoire naturelle des Indes par le P. Acoſta, in 8°. *Paris*, 1598.

Histoire universelle depuis le commencement du monde jusqu'à présent, traduite de l'Anglois, d'une société de gens de lettres, in 4°. *Amsterdam*, 1747, &c. &c.

Historia de las guerras civiles de Granada, in 8°. *en Paris*, 1660.

Historiæ poeticæ scriptores antiqui, in 8°. *Parisi*. 1675.

Historiæ Augustæ scriptores, in fol. *Parisi*. 1620.

Homere (traduction d') avec des remarques, par M. de Dacier, in 12°. *Paris*, 1741.

Homeri Ilias & Odyssea, & in eisdem scholia, in 4°. *Cantabrigiæ*, 1711.

Hor Apollinis hieroglyphica, &c. in 4°. *Trajecti ad Rhenum*, 1727.

Hornius de originibus Americanis, in 8°. *Hagæ*, 1652.

Hyginus in mytograph. Latin. in 8°. *Amstelodami*, 1681.

I.

Jamblichus de mysteriis Ægypt. cum notis Thom. Gale, in fol. *Oxonii*, 1678.

Jamblichus de vita Pythagorica, in 4°. *Amstelodami*, 1708.

Jaquelot, dissertations sur l'existence de Dieu, in 12°. *Paris*, 1744.

Jaquelot, traité de la vérité & de l'inspiration des livres
du

du Vieux & du Nouveau Testament, in 12°. *Amsterdam*, 1752.

Journal (le) des savans, in 4°. *Paris*, nouvelle edition, 1723, &c. &c.

Journal économique, in 12°. *Paris*, Janvier, &c. &c. &c.

Journal des observations physiques, &c. par le P. Feuillée, in 4°. *Paris*, 1714. 1725.

Journal du voyage dans la Guyane, par les PP. Grillet & Bechamel, Jésuites, in 12°. *Paris*, 1682.

Josephi opera omnia, in fol. *Amstelodami*, 1726.

S. Isidori opera omnia, in fol. *Coloniæ Agrippinæ*, 1617.

Isocrates, in fol. *Basileæ*, 1750.

Jugemens sur quelques ouvrages nouveaux, in 12°. *Avignon*, 1745.

Julius Africanus, *apud Syncellum*.

Julius Firmicus, in fol. *Romæ*, 1499.

Junius de pictura veterum, in fol. *Roterodami*, 1694.

Justini historiæ (variorum), in 8°. *Lugduni Batavorum*, 1719, K.

KIrcher (Athanas.) la Chine illustrée, in fol. *Amsterd.* 1670.

Ejusdem obeliskus Pamphilius, in fol. *Romæ*, 1658.

Kuhnus in notis ad *Æliani* var. hist. in 4°.

L.

LAet, description des Indes Occidentales, in fol. *Leyde*, 1640.

Leges Salicæ, dans le recueil des historiens de France par D. Bouquet.

Lenglet, méthode pour étudier l'histoire, in 4°. *Paris*, 1734.

Lescarbot, histoire de la Nouvelle France, in 8°. *Paris*, 1611.

Lettres édifiantes de quelques missionnaires de la compagnie de Jesus, in 12°. *Paris*, 1717, &c. &c. &c.

Luciani opera, cum notis variorum, in 4°. *Amstelod.* 1743.

M.

MAcrobii opera, cum notis variorum, in 8°. *Lugduni Batavorum*, 1670.

Maillet,

334 *Table of the Names of the Authors.*

- Maillet, description de l'Egypte, publiée par M. l'Abbé Mascrier, in 4°. *Paris*, 1735.
- Manetho, *apud* Syncellum & Josephum.
- Marc Paul (voyages de) dans le recueil des voyages faits en Asie, publié par Bergeron, in 4°. *La Haye*, 1735.
- Marculphi formulæ veteres inter historiæ Franc. scriptores, ex edit. Benedictinorum, in fol. *Paris*. 160.
- Marmora Arundelliana, aliaque academ. Oxoniensis, in fol. *Londini*, 1732.
- Marsham chronicus canon, in fol. *Londini*, 1672.
- Martianus Capella de nuptiis Mercurii & Philologiæ, in 8°. *ex officina Plantiniana*, 1590.
- Martini, histoire de la Chine, in 12°. *Paris*, 1692.
- Megasthenes, *apud* Eusebii præp. evangel. & Josephum.
- Memoires de l'académie de Berlin, in 4°. *Berlin*, 1745, &c. &c. &c.
- Memoires de l'académie des sciences, in 4°. *Paris*, 1732, &c. &c. &c.
- Memoires (anciens) de l'académie des sciences, in 4°. *Paris*, 1734.
- Memoires pour l'histoire des sciences & beaux arts, autrement dit les Mémoires de Trévoux, in 12°. *Paris*, 1701, &c. &c. &c.
- Memoires de l'académie des inscriptions, in 4°. *Paris*, de l'imprimerie royale, 1736, &c. &c. &c.
- Memoires (nouveaux) des missions de la compagnie de Jesus dans le Levant, in 12°. *Paris*, 1715, &c. &c. &c.
- Memoire touchant l'établissement d'une mission Chrétienne dans le troisième monde, autrement appelé la terre Australe, in 8°. *Paris*, 1663.
- Mercure de France, in 12°. *Paris*, 1717, &c. &c. &c.
- Mercure Indien, in 4°. *Paris*, 1672.
- Merveilles des Indes Orientales, in 4°. *Paris*, 1669.
- Meursii miscellanea Laconica, *apud* Gronovii thesaurum Græcarum antiquitatum.
- Minutiüs Felix, in 8°. *Cantabrigiæ*, 1707.
- Mœurs des sauvages Américains, in 4°. *Paris*, 1724.
- Monnier,

Monnier, (le) observations d'histoire naturelle; suite des mémoires de l'academie des sciences, pour l'année 1740, in 4°. *Paris*, 1741.

Montfaucon (l'antiquité expliquée par D. Bernard de) in fol. *Paris*, 1719.

Munkerius de intercalatione, in 8°. *Lugduni Batavorum*, 1680.
N.

Newton, la chronologie des anciens royaumes corrigée, in 4°. *Paris*, 1728.

Nicolaus Damascenus in *excerptis Valesii*, in 4°. *Paris*, 1634.

Norden, voyage d'Egypte & de Nubie, in fol. *Copenhague*, 1755.

Nonni Dionysiaca, in 8°. *Hanoviae*, 1610.

Nouvelles litteraires de la mer Baltiq.

Nouvelle relation de la France exquinoxiale, in 12°. *Paris*, 1743.

O.

Observations mathematiques, astronomiques, &c. des Peres de la compagnie de Jesus, rédigées & publiées par le P. Souciet, in 4°. *Paris*, 1729.

Observations de Bélon, in 4°. *Paris*, 1588.

Olaus Magnus, sive Rudbecks, Atlantica, &c. in fol. *Upsaliae*, 1675-1679.

Olaus Wormius de Danica litteratura, in fol. *Hafniae*, 1651.

Eiusdem historia de gentibus Septentrionalibus, in fol. *Romæ*, 1555.

Olympiodorus, apud Photium. Opuscula mythologica, &c. in 8°. *Amstelodami*, 1688.

Origenes contra Celsum. Eiusdem philocalia, in 4°. *Cantabrigiae*, 1677.

Otho Sperlingius de nummis non cufis, in 4°. *Amstel.* 1700.
P.

Palæphatus de incredilib. histor. in Opuscul. mythologicis.

Palmarii à Grentmesnil exercitationes in optimos fere auctores Græcos, in 4°. *Lugduni Batavorum*, 1668.

Parthenii

Parthenii Erotica *apud* historiæ poeticæ scriptores antiq. in 8°. *Paris*. 1675.

Pausanias, in *fol. Lipsiæ*, 1696.

Perizonii origines Babylonicæ & Egyptiacæ, in 12°. *Lugduni Batavorum*, 1711.

Perizonii not. ad Æliani var. hist.

Perrault, (traduction de Vitruve par) in *fol. Paris*, 1684.

Petis de la Croix, histoire de Genghiscan, in 12°. *Paris*, 1710.

Pezron, l'antiquité des temps rétablie, & defendue, &c. in 4°. *Paris*, 1687.

Phavorinus *apud* Diogenem Laert.

Philonis Judæi opera omnia, in *fol. Lutetiæ Paris*. 1640.

Philostrophorum opera omnia, in *fol. Lipsiæ*, 1709.

Photii bibliotheca, in *fol. Rothomagi*, 1653.

Physique de Rohault, in 4°. *Paris*, 1671.

Pierre de la Vallée (voyages de) in 4°. *Paris*, 1663.

Pietro della Valle, (viaggi di), in 4°. *Romæ*, 1650. *I have made use of both these editions.*

Piganiol de la Force, description de la France, in 12°. *Paris*, 1722.

Pindarus, in *fol. Oxonii*, 1697.

Platonis opera omnia, in *fol. Francofurti*, 1602.

Plinii historia naturalis, edit. Harduini, in *fol. Paris*, 1723.

Plutarchi opera omnia, in *fol. Lutetiæ Parisior. typis regiis*, 1624.

Pococke's description of the East, in *fol. London*, 1743.

Polyæni stratagemata, in 8°. *Lugduni Batavorum*, 1691.

Pollucis (Jul.) Onomasticon, in *fol. Amstelodami*, 1706.

Polybii historia, in *fol. Paris*. 1609.

Pomponius Mela de situ orbis, in 8°. *Lugduni Batavorum*, 1722.

Porphyrius de abstinence, in 12°. *Lugduni*, 1620.

Phorphyrius de vita Pythagoræ, in 4°. *Amstelod.* 1707.

Potteri archæologia Græca, in *fol. Lugduni Batavorum*, 1702.

Prideaux, histoire des Juifs, in 12°. *Paris*, 1732.

Principes du droit politique, in 12°. *Amsterdam*, 1751.

Proclus

Proclus in Timæum Platonis, in t. 2°. oper. Platonis, in fol. Basileæ, 1534.

Procopii historia, in fol. Paris, e typographia regia, 1662-1663.

Ptolemæi Almagest. sive magnæ constructionis, &c. in fol. Basileæ, 1538.

Q.

Quintiliani institution. orator. &c. in fol. Paris, 1725.

Quintus Curtius, cum notis var. in 8°. L. Bat. 1658.

R.

Ramusio, raccolt. delle navigationi, & viaggi, &c. in fol. in Venetia, 1563.

Recueil d'antiquités, par M. le C. de Caylus, in 4°. Paris, 1752-1756.

Recueil des voyages qui ont servi à l'établissement & aux progrès de la compagnie des Indes Orientales, formée dans les Provinces-Unies des Pays-Bas, in 12°. Amst. 1725.

Recueil des voyages au Nord, in 12°. Amsterdam, 1731.

Regiæ scientiarum academici historia, autore J. B. Duchamel, in 4°. Paris, 1701.

Reland dissertationes miscellaneæ, in 8°. Trajecti ad Rhenum, 1706-7-8.

Relation (nouvelle) de la Gaspésie, par le P. le Clerc, in 12°. Paris, 1691.

Relation de la haute Ethiopie, dans le Recueil des voyages publiés par Melchisédec Thevenot.

Relation de la riviere des Amazones, par le P. d'Acugna, in 12°. Paris, 1682.

Republique (nouvelles de la) des lettres, in 12°. Amsterdam, 1715. &c. &c. &c.

Respublica, sive Status regni Scotiæ & Hiberniæ, diversorum autor. in 16°. Lugduni Batavorum, 1627.

Rhetores Græci veteres, in fol. Venetiis, edit. Aldin, 1527.

Rhodigini (Ludovici Cœlii) lectiones antiquæ, &c. in fol. Francofurti, 1666.

Rollin, histoire ancienne, in 12°. Paris, 1740.

S.

Salmasii Plinianæ exercitationes, in fol. Paris. 1629.

Salmasii Plinianæ exercitationes, in fol. Trajecti ad Rhenum, Vol. III.

338 *Table of the Names of the Authors*

- Rhenum*, 1689. *I have made use of both these editions.*
 Scaligeri (Josephi) notæ in chronic. Eusebii, in fol. *Amstelodami*, 1658.
 Schefferus de militia navali veterum, in 4°. *Upsalæ*, 1654.
 Schoerlone amœnitates litterariæ, in 8°. *Francofurti*, 1725-1731.
 Scheuchzer (physique sacrée trad. du Lat. de Jean-Jaques), *Amsterdam*, 1732, & suiv. in fol.
 Schouten (voyages de) dans le Recueil des voyages qui ont servi à l'établissement de la compagnie des Indes Hollandoise.
 Scriptores rei rusticæ veteres Latini, in 4°. *Lipsiæ*, 1735.
 Selden de diis Syris, in 8°. *Amstelodami*, 1680.
 Senac, nouveau cours de chymie, in 12°. *Paris*, 1757.
 Senecæ (L. Annæi) opera omnia, in 8°. *Amstelodami*, 1672.
 Servius. *See Virgilii opera.*
 Sexti Empirici opera omnia, in fol. *Lipsiæ*, 1718.
 Sicard, (mém. du P. Sicard), dans les Mémoires des missions du Levant.
 Sigonius, *apud* Gronovii thesaurum antiquitat. Græcarum.
 Simplicius in Aristotel. de cœlo, in fol. *Venetis*, Ald. 1526.
 Solini polyhistoria, in fol. *Trajecti ad Rhenum*, 1689.
 Sophoclis tragoediæ, in 4°. *Paris*. 1568.
 Spectacle de la nature, in 12°. *Paris*, 1749.
 Spencer de legibus Hebræorum ritualibus, in fol. *Cantabrigiæ*, 1685.
 Stanley historia philosophiæ, in 4°. *Lipsiæ*, 1711.
 Stephanus Byzantinus de urbibus, in fol. *Amstelodami*, 1678.
 Stobæi opera omnia, in fol. *Genevæ*, 1609.
 Strabonis geographia, in fol. *Amstelodami*, 1707.
 Suidæ lexicon, in fol. *Cantabrigiæ*, 1705.
 Syncelli chronographia, in fol. *Paris*, e typographia regia, 1652.

T.

- Taciti (C.) opera, in 4°. *Trajecti Batavorum*, 1721.
 Tacquet elementa geometriæ, in 12°. *Amstelod.* 1683.
 Tatiani

Tatiani adversus Græcos oratio; in operibus S. Justini, in fol. Paris, 1742.

Tavernier (voyages de), in 4°. Paris, 1681.

Tavernier (voyages de) in 12°. Utrecht, 1712. *I have made use of both these editions.*

Terrasson (histoire de la jurisprudence Romaine par M.), in fol. Paris, 1750.

Tertulliani opera omnia, in fol. Paris, 1664.

Theon Alexandrinus, apud Ptolem. magn. construct.

Theocriti opera, in 8°. Oxoniæ, 1699.

Theodoreti opera omnia, in fol. Paris, 1642-1684.

Theologie physique, in 8°. Paris, 1729.

Theophrasti opera omnia, in fol. Lugd. Batavor. 1613.

Thesaurus linguæ Græcæ ab H. Stephano, in fol. Paris, 1572.

Thevenot (relations de divers voyages, publiés par Melchisedec), in fol. Paris, 1696.

Thucydides, in fol. Francofurti, 1594.

Thucydides, in fol. Amst. 1731. *I have made use of both these editions.*

Thyſius, apud Gronovii thesaurum Græc. antiquitatum.

Tollii fortuita, in 8°. Amstelodami, 1687.

Tournefort, (voyage au Levant), in 4°. Paris, de l'imprimerie royale, 1717.

Traité de la culture des terres, par M. Du Hamel, in 12°. Paris, 1753.

Traité de la police, par la Mare, in fol. Paris, 1713.

Tzetzes ad Hesiod. See Hesiodi opera.

V.

Valeſii excerpta Polybii, Diodori, Nicolai Damasceni, &c. in 4°. Paris, 1634.

Vanſleb, (nouvelle relation d'Egypte, par le P.), in 12°. Paris, 1677.

B. Varenii geographia generalis, in 8°. Cantabrigiæ, 1681.

Varro, apud S. Auguſt. de civitate Dei, & inter ſcriptores rei ruſticæ veter. Latin.

Ubo Emmius, apud Gronovii thesaurum Græc. antiquitatum.

Virgilii

- Virgiliū opera, in 4°. *Amstelodami*, 1746.
 Vitruve (traduction de) par Perrault. *Se Perrault*.
 Vopiscus inter historiae Augustae scriptores, in fol. *Paris*, 1620.
 Vossius de idololatria, in fol. *Amstelodami*, 1700.
 Voyage à l'équateur, par M. de la Condamine, in 4°. *Paris*, de l'imprimerie royale, 1751.
 Voyage au Pérou, par D. Antoine d'Ulloa, in 4°. *Amsterdam*, 1752.
 Voyage d'Anson, in 4°. *Amsterdam*, 1749.
 Voyage de Benjamin de Tudéle, dans le Recueil des voyages publiés par Bergeron, in 4°. *La Haye*, 1735.
 Voyage de Bernier, in 12°. *Amsterdam*, 1699.
 Voyages de Vincent le Blanc, in 4°. *Paris*, 1649.
 Voyage de la Baye de Hudson, in 12°. *Paris*, 1749.
 Voyage de Plan Carpin, dans le Recueil des voyages publiés par Bergeron, in 4°. *La Haye*, 1735.
 Voyages de Coréal, in 12°. *Bruxelles*, 1736.
 Voyages de Dampier, in 12°. *Amsterdam*, 1701.
 Voyage de Frezier, in 4°. *Paris*, 1716.
 Voyage d'Egypte, par Granger, in 12°. *Paris*, 1745.
 Voyages de la Boullaye-le-Goulz, in 4°. *Paris*, 1657.
 Voyage de J. de Lery, in 12°. *Paris*, 1580.
 Voyages de la Hontan, in 12°. *La Haye*, 1706.
 Voyages de François Pyrard, in 4°. *Paris*, 1679.
 Voyage des Indes Orientales, par Carré, in 12°. *Paris*, 1699.
 Voyage de Schaw, in 4°. *La Haye*, 1743.
 Voyage de Wafer, à la suite des voyages de Dampier.
 Voyages d'Ovington, in 12°. *Paris*, 1725.
 Voyage du Levant, par P. Lucas, in 12°. *Rouen*, 1719-1724.
 Uranologion D. Patavii, in fol. *Paris*, 1630.

W.

WEidler historia astronomiæ, in 4°. *Vittemb.* 1741.

X.

XEnophontis opera omnia, in fol. *Paris*, 1581.

TABLE

TABLE referred to above, p. 252. & 254.

*Value and proportion of the French coins.*Denier equal to $\frac{3}{4}$ of a farthing Sterling.

2	Double.					
3	$1\frac{1}{2}$	Liard.				
12	6	4	Sol Paris is equal to		L.	s. d.
					0	0 $\frac{1}{2}$
240	120	8	20	Livre acc.	-	0 0 $10\frac{1}{2}$
720	360	240	60	3	Ecu, crown	0 2 $7\frac{1}{2}$

The French royal foot in the Chatelet, is to the English foot from the standard in Guildhall as 1068 to 1000.

French liquid measures at Paris are, to begin with the smallest, the pesson, which contains six cubic inches. The demi-septier, containing two pessos. The septier, or chopin. The pint, containing two chopins. The quart or pot containing, two pints. The gallon or septier of estimation, containing four quarts; and the muid, containing thirty-six septiers.

The litron at Paris is, by ordinance, to be three inches and an half high, and three inches ten lines broad; and their bushel containing sixteen litrons, is by ordinance to be eight inches two lines and an half high, and ten inches broad, or in diameter within side.

Table of weights at Paris.

Grains.				
24	Penny-weight.			
72	3	Gross.		
576	24	8	Ounce.	
7008	192	64	8	Mark.
9216	288	128	16	2 Pound.

The End of the THIRD VOLUME.

ABILETICED TO ABOVE, D. 25. 6. 24.

Denier equal to $\frac{1}{2}$ of a farthing Sterling.

720	-60	240	60
240	120	8	to Liver
12	6	4	Sol Paris
3	14	Liver	
2	Douglas		

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